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The Supreme Tragedy—War!

A MONTH ago the whole world seemed dreaming of that era of Universal Peace, so long promised, so long delayed, and, at last, we thought, almost at hand. There was—or at least we thought there was—a world-wide call to righteous living. Yet, today we are plunged into the midst of a war, in comparison with which all other combats of modern times seem likely to fade into insignificance.

This war of the nations came without warning. It may be that the events leading up to this tremendous conflict had been shaped in the great chancellaries of Europe, and that by the rulers of contending nations it was anticipated, perhaps even hoped for; still, to most men it came like the Last Trump, "in the twinkling of an eye," giving no opportunity to set in motion the repressive forces of popular opinion, no time for the sober second thought of the real thinking men of Europe to make itself felt.

One thing is certain—in the making of this war the people of Europe had no essential part. It is not waged by them or for them. It is not a war of deliverance from oppression; it is not a "holy war"—a war of religion; it is not a war of races—for Slav is arrayed against Slav and Teuton against Teuton.

It is useless to try now to analyze the causes of this awful disaster; and it is childish for German or English or Russian or French to try to shift the responsibility one upon the other. There is blood-guiltiness that all must share, and for which, if nations and their rulers are responsible to Almighty God, all must bear their portion of the just punishment that is sure to come.

But, whatever the match that lit the magazine, we feel that this explosion of the war-lust depends primarily upon militarism, and that militarism is the buttress of tyranny. Great armies and navies foster the love for war; they keep alive the fires of hatred between nations; strengthen faith in that ancient lie that "might makes right;" serve as instruments of oppression in the hands of tyrants; and put ready to the eager hands of kings the tools for conquest and destruction.

So far as America is concerned, it is a good augury that the breaking out of this great war has aroused no spirit of approval or enthusiasm, but rather one of general horror. Right or wrong, we Americans see in it but another evidence that monarchism—rulership of dynasties—is an anachronism, and that today it is but a weapon of Asmodeus, prince of devils. Upon the thrones of Europe we place the responsibility for establishing again this hell on earth.

And, so, we have read with approval an editorial in *The Chicago Tribune*, entitled "The Twilight of the Kings," which voiced the passionate hope that this war may be the doom of monarchism. "Western Europe," this writer says, "may be caught in this débacle; but never again;" and then goes on to speak in scathing terms about those rulers who give their people to destruction, while invoking with impious phrases and unconscious irony the approval of God upon their acts.

" 'And now I commend you to God,' said the Kaiser from his balcony to the people in the street. 'Go to church and kneel before God and pray for His help for our gallant army.' "

Yes, comments *The Tribune*, "pray that a farmer dragged from a Saxon field shall be speedier with a bayonet thrust than a wine-maker taken from his vines in the Aube; that a Berlin lawyer shall be steadier with the rifle than a Moscow merchant; that a machine-gun manned by Heidelberg students shall not jam and that one worked by Paris carpenters may.

"Pray that a Bavarian hop-grower, armed in a quarrel in which he has no heat, shall outmarch a wheat-grower from Poltava; that Cossacks from the Don shall be lured into barbed-wire entanglements and caught by masked guns; that an innkeeper of Salzberg shall blow the head off a baker from the Loire."

In like manner the emperors of Russia and of Austria invoke the help of Heaven for *their* arms, and seek to call down the lightnings of the Almighty to blast and ruin their enemies. "Our God always has stood by us," boastingly the White Czar told "his children."

If we pray—and well we may—let our prayers be for the millions who are sent out as a sacrifice to the Moloch Ambition, for the women who mourn, and for the children who starve. Let us pray that, with the passing of these dynasties and this crushing, inhuman medievalism, we may see the dawning of a new era, in which wars shall be no more, and all men, of all races, shall be brethren.

THE WAR, AND AMERICA

What effect will this European war have upon us here in America?

No man can answer this question, with any certainty that his prophecies will be fulfilled. It is too much, however, to hope that we shall entirely escape injury. We can be sure that the war will have serious and far-reaching consequences, even in our own country. Any great disaster that destroys the producing-power of any considerable number of its people puts a mortgage upon the future of any nation, and it also injures all the rest of the world; so closely are we woven together by the ties of commerce and industry.

Looking at the matter from a purely mercenary point of view, we must see that American foreign markets are now being wiped out, that new ones must be found for our surplus products, and that new sources of supply for many of the things required in everyday life must be created. Meanwhile many an American must feel the pinch of want, for many a promising industry will be destroyed and many others crippled before we can readjust ourselves to the new order of things.

There will be compensations, of course, and, looking at the matter from the standpoint of material interest, there are reasons to believe that we shall gain more than we may lose. Thus, the necessaries of life will command big prices in Europe. Wheat already is climbing and the prices of live-stock are going up every day. That means prosperity for the farmers of the West, who will have more money to spend than ever before. On the other hand, the crippling of the textile manufacturing industries of England has brought down temporarily the price of cotton; still, this is sure to rise again with the demand for clothing made necessary by the war. Agriculture will flourish, and that will mean easy times.

As to the things we buy from abroad, their prices also are advancing rapidly. Sugar, which we purchase largely from Germany, has gone up with a bound. The American sugar-industry, which promised to be destroyed by the removal of the duty, may not impossibly be revived by this war. All the luxuries—the wines, liquors, silks, jewelry, and finer fabrics of all kinds will become much more expensive. Drugs and chemicals are very largely produced in Germany, and their prices are already soaring, and there is no telling when they will stop. The opium alkaloids, atropine, hyoscine, bismuth, quinine, calomel, iodine and the iodides, phenol, the salicylates, and all the coal-tar remedies and many plant derivatives are advancing day by day.

In many of these things there already is a famine, and the probability is that some of them will become unobtainable if the war

continues for longer than a few months. The wise physician, therefore, will see the necessity of laying in generous supplies of whatever remedies he is using, in preparation for the shortage that is sure to come. Also, it is to his advantage to insist upon American-made goods. Today profit and patriotism honorably join hands.

The same pinch will be felt in almost every other industry. Many a concern that depends upon European sources for raw material has already been compelled to suspend the manufacture of certain items. Fortunately, the demand thus created will stimulate new industrial activity in America, and the domestic manufacture of thousands of articles for which we now depend upon Germany, France, and England is certain to be one of the results of this war.

Before many months, the wheels of the nation will be turning and our surplus will be finding its way into South America, the Orient, and other markets—and in ships carrying the American flag.

Financially, thanks largely to the energy and ability of our Government and our bankers, we are in excellent shape. There is no danger of a panic, and we even have the promise that plenty of credit will be provided for the extension of our business into foreign fields.

All things considered, Americans need not fear for their material welfare. Of all nations in the world, ours should suffer least and profit most. If the war should continue for many months, it is highly probable that one of its results will be, to give the United States the industrial and commercial supremacy of the world. But, even if it be short, the European upheaval will leave the industries of all those contending (and to an extent the neutral) nations crippled and disorganized; and in the meantime we should be forging further and further to the front.

While we must think now of trade, and may seek to capture the world's markets, we should not forget the disastrous consequences of this war upon our brethren beyond the seas. No nation can live to itself alone, and the welfare of one should be the welfare of all. We are likely to have this fact brought home to us sooner or later.

We are at the parting of the ways. Looking back, we can recall, as a part of our own lives and as something in which many of us have had a modest part, the most marvelous era in the history of human development. Only one other age can rival it—that great intellectual uprising which we know as the Renaissance. Our own period will go down into history as the Age of Invention and Industry. Is this era passing? Has it already departed? What is there at hand? What is to follow?

With anxious hearts and tear-dimmed eyes, we peer into the future, hoping that the new era toward which we are facing may make these fratricidal wars impossible, because the welfare of mankind has become the supreme law, transcending the selfish scheming of ministries and the petty ambitions of kings.

We hope—we believe—that the most far-reaching effect of this war, for us, will be the deepening of our own sense of moral responsibility, both as a nation and as individual units in a great democratic state. God grant that it may be so.

For I dipt into the future, far as human eye could see,
Saw the vision of the world, and all the wonder that would be;
Saw the heavens fill with commerce, argosies of magic sails,
Pilots of the purple twilight, dropping down with costly bales;
Heard the heavens fill with shouting, and there rain'd a ghastly dew
From the nations' airy navies grappling in the central blue;
Far along the world-wide whisper of the south wind rushing warm,
With the standards of the people plunging through the thunderstorm;
Till the war drum throbbed no longer, and the battle flags were furl'd
In the Parliament of Man, the Federation of the World!

—Alfred Tennyson.

THE HARRISON BILL PASSES THE SENATE

We have just heard from Washington that on August 15 the United States Senate passed the Harrison Antinarcotic Bill, after striking out the amendments requiring the physician to keep records of all narcotic drugs dispensed, and also rejecting Senator Pomerene's amendment exempting physicians from the operation of the law.

This bill passed the House of Representatives about a year ago. Some minor differences between the House bill and the Senate bill will have to be settled in conference, but since none of these are of vital consequence there is no doubt that these differences will be adjusted promptly. In all probability the bill will have been signed by the President and have become a law before this copy of CLINICAL MEDICINE reaches you.

As the Harrison bill was passed, it is, we believe, entirely acceptable to the great bulk

of the medical profession. We are especially glad to note that the objectionable record feature was rejected. This was bitterly opposed by thousands of physicians, who properly objected to this inquisitorial supervision.

It is to be hoped that now this bill has received the sanction of our national government, it will become the basis and model for state legislation, which will entirely put an end to the illicit traffic in narcotic drugs. We pledge the support of CLINICAL MEDICINE and of its readers to every sincere and disinterested effort to bring about this result.

LATER.—Since the preceding was written we have learned that the N. A. R. D., now in session in Philadelphia, is making a vigorous assault upon the conference committee, with the demand that the bill be modified before final acceptance in such a way as to throw additional burdens and risks upon the physician, and especially upon the dispensing physician. We learn that the druggists are bombarding the members of the conference committee with telegrams and have demanded a special hearing for their representatives. Such a ninth-hour attack, since it gives the medical profession little chance to be heard in rebuttal, is peculiarly insidious and dangerous. It is to be regretted that the N. A. R. D. is taking this attitude, and it is to be hoped the Senate bill will be accepted.

I say that if men lived like men indeed their houses would be temples—temples that we should hardly dare to injure, and in which it would make us holy to be permitted to live.—John Ruskin.

HOME AGAIN AFTER VACATION

As the September sun begins to fail before the advance-guard of winter, the nights grow cool, the school-bell rings, and mother and son turn their steps toward the city. The clean, white bath-room holds an allure superior to that of the lake; the gas-stove has its advantages; the many comforts, luxuries, and diversions of the great city begin to take on an attractiveness they did not possess when the lurid sun of July drove all movable population out.

How good it seems to be home again! How nice to have the movies, the delicatessen, the ice-cream-parlor, the department stores, the neighbors, the church; yes, Johnny even finds an excitement in meeting the other fellows at school, comparing notes, telling moving tales of adventure, trying the newly learned tricks. Rosy cheeks, developed muscles, bright eyes, minds stored with incident and experience, many are the good things accruing to the summer sojourn in mountain or forest, by lake or river, on the ranch or in the piney woods.

Not all the returns are so good. Many a returning pilgrim has brought with him a grievous memento, in the shape of disease. Hundreds and thousands coming from the four points of the compass may congregate at any one resort, and whatever malady is carried by any one of them may be carried back by many of the others, and thus transmitted far and wide.

The ancient idea was that these affections were transported, on the clothing, by fomites, or contagious elements. It may be so, but nowadays we look to insects, and, also, especially to the excretions. The source of many infections is to be looked for in the secretions of the respiratory membrane; but the great peril lies in the alimentary canal. Typhoid fever, dysentery, the newly arrived sprue, and a host of undefined gastrointestinal ailments are brought with them from the summer "health"-resorts to the city by returning vacationists. We may look for the usual autumnal outbreak of typhoid fever for this reason.

Investigating the toilet arrangements in the summer-resorts, we can only wonder that such attacks are not more common. The farmer and innkeeper have an immovable belief that when feces and urine go into the ground and out of sight that is the end of them; and that the best places for the family-well and the privy are as close as possible to the house, because of its convenience; if in close apposition, that is a matter of indifference. "This talk of surface drainage being injurious is all poppycock; everybody knows that the earth purifies sewage. Why, have we not heard from a health-officer of the great, cultured city of Boston, that nice, clean manure is not at all injurious in milk, unless in such quantity as to impart a brownish tint to the fluid and to communicate such a repulsive odor that it will deter buyers?"

At the present rate of progress, it seems likely that the farmers may be taught hygienic truths in about a thousand million years. We must look further for an adequate remedy. This we find in the intestinal antiseptics, intelligently employed.

Now Dr. Crozier Griffith asserts that there are today "very few of us who believe in the efficacy of intestinal antiseptics. Yet, this writer dares to announce himself as one of those "few"—the "few" numbering, accord-

ing to our estimate, about nine myriads out of the doctors of the United States. That allows one myriad who really do not believe in these agents, and four myriads who think they don't, or who say they don't, because they think it is highly scientific or pleasing to the ultra-stiffics to talk that way.

Of the myriad of true unbelievers, there isn't one who knows enough about the matter to defend his position logically. They all refer to current belief or explain that they have no belief in or use for drugs of any description. A few have set up the image of the Golden Guineapig, and worship it. That a hundred thousand human beings have taken the sulphocarbolates and, in consequence, found their feces lose abnormal odor, their symptoms relieved and health restored, means nothing at all. They ask, Where are your experiments on the Great Piglet?

This age and this land and this people demand something definite, something effective; and they get it in the sulphocarbolates. While the farmer is getting "modern science" into his privies and wells, those who resort at his place may take enough antiseptics to render themselves safe against any germs they may devour with their host's fresh vegetables and fried chickens. People may be contented to take the harmless remedy and wait until the learned doctors shall agree as to just how this chemical works. To make the assurance of safety doubly sure, those under 45 should be immunized by injections of the typhoid prophylactic vaccine

Every man who sends his family to a summer-resort should have his doctor first investigate its sanitation, and he send them only to such places as receive the doctor's sanction. Otherwise each exposed member should have a daily dose of the antiseptic, besides an occasional intestinal flush of saline laxatives. This procedure is far better than to wait until some intestinal malady has developed and then to cuss the farmer.

Any digestive disorder at a summer-place should be promptly and thoroughly looked into. Too often these are attributed to change of water or to the use of green fruits or vegetables, and are suffered to go without any real attention, beyond taking a little ginger or castor-oil. When later the infected person comes down with typhoid fever, the return to city water is likely to be blamed.

More than ever we are inclined to believe that the day has come for the family doctor to assume the position of sanitary adviser or director; to prevent disease rather than to wait until it has developed. In his own clientele, this writer has explained this matter, and has suggested that he should be remunerated for preventing illness; and he has yet to make this suggestion and not have it received with enthusiasm. At this day, with all the weight of today's duties and responsibilities weighing upon people, nobody can afford to be ill.

THE DOCTOR AND THE DRUG-HABIT

I have before me two newspaper clippings upon which I am moved to do a little talking for publication. The first relates to the arrest of a certain physician in New York on the charge of selling morphine and other contraband drugs to the inmates of Blackwell Island Workhouse, out of which nefarious trade he is said to have accumulated a very handsome competency. Concerning this particular case, of course, I am not in a position to make any pointed comment, as it still is *sub judice*, but as to the prosecution and punishment of such offenders in general among the medical profession, I feel as the man in the story did who was not present at the funeral of a certain acquaintance, but heartily approved of it.

At all times and on general principles, the medical profession owes a debt of honor to itself and to the public to preserve a more than ordinary cleanness of the hands that hold the world's physical and mental health in their keeping and minister to humanity's sufferings and weaknesses.

It is a base enough business in any man to make a living by pandering to the depravity of a lot of wretched degenerates in the clutches of a miserable habit that destroys both body and soul; but there is a peculiarly atrocious infamy in such a dastardly practice on the part of a physician, since he knows, better than anyone else, the horror of the thing and his honor is pledged to uplift the pitiable beings he is dragging down. Hardly any condemnation can be too scathing for a man who thus betrays his professional and human trust; and the medical profession should be quick to purge itself of such disgraceful members.

At this particular time, it is more than ever imperative that the medical profession should maintain, with unquestioned good faith and unremitting alertness, the cleanness of its skirts in this matter of habit-making drugs, in view of the protests which we are now making against the proposed extension of restrictive legislation upon this very subject aimed at medical men.

We, as doctors, cannot consistently demand a free hand in the ordering and dispensing of these drugs unless we are able to show a clean record in our handling of them. And while we can not, as a body, prevent individual violations of the trust, we can and should be prompt to repudiate such violators and to cast them out of our midst.

All of which being said, and emphasized, I wish to pay my respects to the second newspaper clipping, in which the writer draws from the incident above referred to, and from a few others like it, the conclusion that doctors, as a class, are makers of drug-fiends.

Such a conclusion is absolutely unwarranted and is a gross and uncalled-for libel on the medical profession. There are, of course a few scoundrels in the medical fraternity, as there are in every social group made up of units of human nature.

At that, I believe the medical profession will compare favorably in this respect with any other group. And, unfortunately, we cannot deny that here and there a case does occur in which the doctor, through carelessness or excess of zeal, induces a drug-habit in his patient; but this is so rare, as compared with the other factors that lead men into drug-addiction and furnish them the drug, that it is scarcely to be reckoned with.

When all has been admitted that can, or ought to, be admitted concerning the doctor's part in this business, it is a very very small, inconsiderable, individual part, and which by no means can be laid up against the profession as a whole.

No, the doctor is not a maker of drug-fiends. On the contrary, the physician, of all men, is the most earnest and intelligent and active crusader against the drug-evil, the friend and helper of its poor, besotted victims, and the relentless castigator of all who trade in it, whether they be in the medical profession or outside of it.

And they asked me how I did it,
  And I gave them the Scripture text,
You keep your light so shining,
  A little ahead of the next.
They copied all they could follow,
  But they couldn't copy my mind.
And I left them sweating and stealing,
  A year and a half behind.
—Rudyard Kipling.

MEDICINE NOT PHILANTHROPY

I have before me two citations, from two very different sources both as to place and time, that recently appeared in current medical and religious journals, respectively, upon which I am minded to make a little preachment in the interest of honesty and common sense.

One of these quotations is from the writings of Dr. Andrew Taylor Still, the originator of Osteopathy, who lived and died in the last century. It is as follows:

"My business is, to destroy my business. I teach people how to do without me. Health is a normal condition, not disease. A science of drugs can never help produce a perfect race, free from the demons of fear and disease."

The other one is taken from the editorial pages of a present-day religious journal, in which the writer is paying his respects to the physician as a public benefactor. It reads.:

"Those who wince under the high bills presented for medical attention may sometimes lose sight of the beneficent crusade which all reputable doctors are making for the prevention of disease. It would seem they are thus working directly against their own financial interests."

I cite both of these quotations, where one would have served the purpose, because they exemplify the long standing and the wide prevalence of the fallacy which I wish to expose, and, so far as I may, to explode. They are, both of them, factitious statements, but containing a plausible error, one with which we have managed to delude ourselves for so many years, and to which we have given such wide and popular currency, that it is almost as much as a medical-editor's life is worth to point it out—especially in these days, when the error has acquired more plausibility than ever.

Heaven knows, the medical profession, both in its past record and in its present showing, has enough genuine cause for legitimate pride, without making cheap bids for gratuitous credit, on grounds that are spurious as well as foolish. The continual iteration of this assertion, that the medical profession is working against its own financial interests, must be as nauseating to the sensible layman as it is ridiculous to the sane physician; and, if the generality of doctors could only be brought to see it, such a statement is not very flattering to the intelligence of the profession as a whole.

Candidly, no medical man is deliberately and systematically working against his own interests; if he did, he would be neither a hero nor a martyr, but a fool. That, be it remarked in passing, is one of the legal tests of insanity. Not that there may not be, here and there, individual physicians who, with what they consider sufficient reason, are ut-

terly sacrificing their own interests to that of the race, to their own continual hurt. But we now are speaking of aggregates and averages, not of isolated exceptions; of the profession, not of individual men.

As a profession, we do not believe that people will ever be able to do without us. We hope they will not—in our day, at least. Like all other aggregations of men, we are made up of human beings, with whom it always has been, and still continues to be, a natural law that nothing worth while is ever accomplished except through self-interest.

True, we are learning, in common with every other calling (perhaps a little faster than most callings), that this self-interest is much more highly subserved when it aligns itself with the general weal. So that, if we chose to be cynical, we could persuade ourselves that even in this broadening of our interests there was a dominating element of selfishness. But I, for one, am no cynic, and I verily believe we are really entitled to some credit in that we have dared, more than perhaps any other body of men has done, this larger upper stratum of self-interest.

But to say that we are deliberately and persistently working to injure our own interests or to put ourselves out of business, that is arrant nonsense. And to boast about it and make a bid for praise on that ground, is worse than nonsense—it is sheer cant. We may not expect that the nature of our service will always remain the same; we may reasonably believe that pills and tinctures will give way to some other agents of healing; we may even look forward to the time when the business of the physician will be to keep people out of illness rather than to get them out of it. Nevertheless, it may safely be postulated that the medical profession, as a whole is not predicating any of its thought or conduct on the assumption of teaching the people to do without it.

The sooner we stop giving currency to such humbug, the less ridiculous we shall make ourselves.

THE BUBONIC PLAGUE IN NEW ORLEANS

Eternal vigilance is the price of safety; and this price, unceasingly and unstintingly paid by the United States Public Health Service, has held this country so safe from the invasion of bubonic plague that in the past twenty years the dread disease only once gained a foothold on American soil. Now, for the second time in that period, it has made its appearance in New Orleans, where, however, it is receiving vigorous and effective attention at the hands of Doctors Blue and Rucker and their efficient staff of disease-fighters.

One of the remarkable and significant things about this recent invasion is the calmness and equability with which it is regarded, not only by the country at large, but even by the stricken city. This attitude is not expressive of a callous indifference or ignorant belittlement of the situation. It indicates, on the contrary, an intelligent understanding of the measures or controlling this Black Death and a large confidence in the men who have the measures in hand. Outside the invaded city, and no doubt among a great many of its own citizens, one hardly knows that the plague exists, except as one sees references to it from time to time in the medical and lay press. And this is not due to any conspiracy of silence, for there never was a situation of the kind more frankly and openly dealt with than this one, but to the fact that there are efficient, capable men there on the job and it is being adequately taken care of in a business-like manner.

But we, who are in the quiet zone, ought not to lose sight of the tireless, well-directed activities at the seat of war which guarantee this peaceful security. Surgeon-General Blue and his associates are doing valiant and high-grade work, putting into energetic and intelligent practice all the knowledge that modern research has brought concerning the black plague. His own wide experience in fighting this disease in Honolulu and San Francisco, and Surgeon Creel's yeoman work at Porto Rico, have made these men masterly experts in the control of such a situation; and they are handling it in a masterly fashion.

The task promises to be an arduous one. According to the official report of the Public Health Department, the infection among the rats appears to be widely disseminated, and it will be necessary to make a rodent survey of the entire city. Special ordinances have been adopted regarding the rat-proofing of buildings, the maintenance of chickens, the disposal of garbage, and the fending off of ships.

There is not much—practically nothing, indeed—that we, as individuals, can do in the way of actual assistance in the matter. The burden falls wholly on the men who are on the spot. But we can at least extend to Surgeon-General Blue and his associates our sympathies and good wishes, and let them know that the great work they are doing and have done, at many places, in many ways, for

many years, is heartily appreciated. It is little enough that they get, in the way of material reward, for their splendid work; it is but just that they should receive the highest honor and gratitude of the profession and of the public.

Don't worry, though above your head
The threatening storm clouds meet.
The rainbow, as of yore, shall spread
Its sign of promise sweet.
The flowers fled when winter gray
Proclaimed again his cruel sway
Yet early blossoms smile and say
"Don't worry."

WRITING PRESCRIPTIONS IN ENGLISH

Exercising its usual privilege of censorship of the entire world and all that is in it, *The Chicago American* recently came out with an editorial entitled "Doctors' Prescriptions in Plain English." This editorial uses as a text the Boylan Act, just made law in New York State, which, among other things, requires physicians, dentists, and veterinarians to write their prescriptions for habit-forming drugs upon blanks supplied by the State.

By way of comment upon this law, the writer of the editorial cited goes on to say that "every doctor should be compelled to write his prescriptions plainly, so that the patient, the father or mother, or husband or wife, would know what drugs a prescription calls for;" and, furthermore, that "he should be compelled to write out in plain English the name and character of the drug he prescribes." Then follows the still more erudite suggestion that "he should not be allowed to insert any poison in a prescription without writing plainly the word 'poison' on the prescription."

This again illustrates the truth of the trite saying that "a little knowledge is a dangerous thing." If the *American* writer knew a little more about medicine and doctors, he would not be guilty of perpetrating such asinine and dangerous rot. It is not true that physicians write their prescriptions in Latin merely for the sake of creating an atmosphere of "mystery and gloomy superiority," as stated by the writer in the *American*. Their purpose in so doing is, primarily, to protect the patient himself.

The majority of remedies are simple things; the names of most of them are household words, and there is nothing mysterious about them. The great mystery is the human body, and so great and so complex a problem is this, so dangerous is it to tamper with it needlessly, that it is necessary to throw around the patient certain safeguards, to prevent him from falling into the habit of self-medication. Medicines, generally speaking, are not specifics for diseases. They are used to correct certain aberrations of function, and they must be used nicely, wisely, with an exact appreciation of their action in every individual case.

The people generally are looking for specifics—"cures" for dyspepsia, gastritis, locomotor ataxia, corns, piles, and every other ailment flesh is heir to. If the average person gets a "prescription" that helps him, he is likely to jump to the conclusion that it will help every other individual who has pains and ailments like his own; and thus it comes that this simple remedy, that "useful prescription," is peddled around, and even the Family Doctor Department of great newspapers, such as the *American*, helps along this idea—encouraging thousands of people to take drugs, they do not need, for diseases which do not exist. Thus used, drugs do infinitely more harm than good.

The popularization of self-medication is dangerous, and especially is this true with regard to drugs used for the alleviation of pain. The physician, with all his shortcomings, is a much safer guide than any layman possibly can be, and he (the doctor) knows that it is unwise to encourage patients in the belief or the inference that they themselves can select their own anodynes and purchase them at any drugstore.

If doctors would control absolutely the administration of narcotics, there would be few drug-habitués. It is because people come to know the names of these drugs, become too familiar with them and thus acquire the contempt and self-pride of familiarity, that they fall easy slaves to these habits.

No true physician wilfully permits or encourages the use of narcotics; but he can do nothing for or with those who are beyond his control.

Even more foolish is the suggestion that the physician be required to write the word "Poison" on every prescription which contains a poison. What does the astute editor mean by this? Let him define a poison—if he can. If he can do this accurately, he is doing something that no medical man yet has succeeded in doing. The compilers of the U. S. Pharmacopeia have refused to undertake this "simple problem," and even our lawmakers have hesitated to grapple with it. A Philadelphia pharmacist has suggested that

if any drug kills in doses of 2 grains it shall be considered a poison. In one state a bill was introduced last year that required every drug which caused death in doses of 20 grains, if a solid, or 1 dram if a liquid, to be labeled "Poison."

The simple truth is, nobody knows just what a poison is and what it is not. Is belladonna a poison? How about digitalis, camphor, ergot, quinine, calomel, about the horde of other things that have produced fatalities, often in relatively small doses?

The layman loses sight of the fact that drugs employed as remedial agents are not administered for their poisonous action. They are ordinarily taken to produce certain definite modifications of function. To suggest, by means of a label or otherwise, that, as used in the prescription, they are dangerous, is to put in the patient's mind a psychological impulse which is potent for evil and may undo any good that otherwise might be effected.

Let the shoemaker stick to his last. Let our newspapers attend to their business of giving the people news about the war in Europe, about President Wilson's policies, the revolution in Mexico, the latest scandal in society, or anything else in which the public may be interested. Those are things they are supposed to know something about. As to the practice of medicine, these men are no more competent to give advice than they are to tell a plumber how to wrap a joint or an architect how to design a skyscraper.

The medical profession consists for the main part of highminded, educated men, who have many problems to grapple with, and are dealing with them as wisely and conscientiously as they know how.

The writer can not close this editorial without branding as a falsehood one other statement made by *The American*, namely, that "it is notorious that the great majority of drug-fiends have been created innocently, carelessly or otherwise by doctors." In many cases, it is true, the victim has obtained his *first* dose from the doctor; in the vast majority of instances, however, the narcotic was given to relieve great suffering, and not only is its use justified under such circumstances, but to withhold it would brand the medical attendant as cruel and inhuman. However, doctors do not keep on dosing out or prescribing these drugs indefinitely.

The real causes of narcotic habituation are this damnable itch for self-medication—encouraged by the daily press in editorials like the one we are discussing—and the ease with which it has been, and still is, possible to secure these drugs at any drugstore. Physicians *do not*, except in the rarest of instances, keep on repeating prescriptions for narcotics The trouble is that they are refilled again and again without orders from the doctor.

The present writer has been following the newspaper reports of arrests of persons engaged in the traffic in habit-forming drugs and has been struck by the fact that it is not so much sick people who are being exploited as it is the weaklings—the negroes in the South, the denizens of the red-light districts, and the ignorant and poverty-stricken people of the slums. These people somehow are led to believe that these "medicines" are the panaceas which they need. Could they but be persuaded to consult a physician and depend upon his advice before resorting to drugs, ninety-nine percent of them could be saved.

It makes one's blood boil with indignation to read these assaults upon the physician It is shameful that journals such as *The American* should be parties to this program of defamation of the medical profession which latter, however—to its shame—submits without protest to the efforts of it enemies to injure its position and prestig and bring its members into public disrepute

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Great men and little have the same accidents, the same temptations, the same passions; but one is on the felloe of the wheel and the other near the axle, and so less agitated by the same revolution.—Pascal.

FISCHER'S VAGOTONIA THEORY OF SEA-SICKNESS

Elsewhere in these pages (see May, p. 428) there has been presented in outline Dr. J. Fischer's theory regarding the nature of seasickness, together with his actual experience with an application of a rational causal therapy based thereon. In view of this hitherto puzzling trouble affecting so large a portion of humanity, a recurrence to this subject seems justified; the idea being, to set forth the new theory somewhat more in detail.

To begin with, Fischer assumes, in persons prone to seasickness, an undue irritability of the pneumogastric nerve (vagotonia); and, further, this view, on its face, is supported by the favorable action of atropine in this condition. (Proof by causal therapy.) Then Fischer shows how, at the hand of his vagotonia theory, not only the effect of the pendulum movements—as also occasional

psychic influence—upon the autonomic (in fact, upon the entire vegetative) nervous system can satisfactorily be explained, but also nearly all other peculiar phenomena observed in seasickness; even covering the seeming contradictions between the mechanistic and the psychologic theories. Still, that more or less in the theory as yet is hypothetic is admitted by the author. In what follows we shall adhere more or less closely to the original text. (Cf. *Muench. Med. Woch.*, 1913, p. 1649.)

How, now, Fischer asks, can the action of atropine, curative as well as prophylactic—an action which impresses one as a causal therapy—be explained? That the atropine influences the vegetative nervous system, seems plausible at once; still, although this mydriatic, in conjunction with strychnine, has successfully been prescribed in seasickness for a quarter of century (Skinner, Girard), the exact manner of its action largely remained an unsolved problem.

Now, however—as already pointed out in our previous article—the researches of L. R. Mueller, Langley, Gaskell, and others upon the physiology of the vegetative nervous system, and more particularly the doctrine of vagotonia as promulgated by Eppinger and Hess, serve to furnish us with a clue to its solution. And it must be confessed that Fischer's presentation rather captivates one's fancy.

What, then, do we know today about the physiology and pathology of the vagus, and, more broadly, the autonomic nervous system?

The normal peristaltic movements of the stomach, as also antiperistalsis—at least so far as cerebral emesis is concerned—is initiated, determined, by the pneumogastric nerve; and antiperistaltic movements can be inaugurated solely by psychic processes. Irritation of the same nerve frequently gives rise to gastric hypersecretion and hyperacidity; also, to accelerated intestinal peristalsis and, above all, to spastic constipation. Pharmacologic irritation of the nerve produces salivation. The vagus influences the circulatory apparatus: like the sympathicus, it may control vasomotor functions; by its inhibitory action upon the heart, it may slow the pulse, affect the regularity, evenness and strength of the cardiac contractions, and lower blood pressure. Further, respiration may be accelerated or diminished; also, the sudoriparous apparatus may be aroused to activity. Finally, the emotions exert a profound influence upon the vital organs, and these in turn influence the emotional states through the vegetative nervous system.

Now let us briefly apply this knowledge to the leading phenomena observed in naupathia (seasickness) and allied derangements.

First of all, we have the nausea and vomiting, and often passengers are attacked even while yet inside the harbor and with the sea quiescent. It is plain, if we view seasickness as a neurosis of the vegetative—and, more particularly, of the autonomic—nervous system, that these phenomena may unrestrainedly be referred to psychic processes acting upon the gastric motor centers. Similarly, a large percentage of the prominent symptoms are readily explicable upon the same assumption of a neurosis of the vegetative system. Thus, for instance, the sialorrhea (virtually the first sign), increased gastric secretion and acidity, clammy skin and cold perspiration, constipation (pronounced in proportion to the severity of the attack and relieved, concurrently with it, by atropine), the circulatory disturbances, including pallor, chills, tachycardia, bradycardia, giddiness, irregular and uneven heart action, lowered cardiac sounds, hypotonia; while ill-humor, apathy, difficult thinking, all these phenomena plainly announce an alteration of the psychic state.

Some of these pathologic states Fischer discusses more in detail. Thus, he points out that the vagus as well as the sympathicus (trisplanchnic nerve) have to do with vasomotoric functions; of what nature these are, however, we do not know. Pallor of the face and giddiness occur after pharmacologic (e. g. after physostigmine) irritation of the pneumogastric nerve; hence, these symptoms of seasickness well may be referred to irritation of the autonomic system. The tachycardia, of course, is connected with the sympathetic nervous system. In this manner, it is averred, nearly all the other symptoms can be deduced from an irritation of the autonomic system, and only few having to be referred to the sympathetic nervous system.

At the risk of redundancy, a few points previously touched upon may in this connection be treated here a little more in detail; one question being why very young children never and the aged rarely are taken seasick.

Let us recur once more to the writings of Eppinger, Hess, Dehio, and Krehl. Briefly stated, the theory of these authors is that the vagotonics are almost exclusively persons of middle age, while in the aged the vagotonus either is extremely weak or absent entirely. As for infants and the very young children,

Pfaundler and Schlossmann (corroborated by Soltmann's animal experiments) assert that in them the subsequent equilibrium between the excitating and inhibiting forces—in other words, between the sympathetic (modern classification) and the autonomic nervous systems—has not as yet been developed or established. Consequently, Fischer argues, their immunity may be considered to arise from a lowered vagotonus and a reduced irritability of the pneumogastric nerve.

Next, we have the disposition to seasickness or immunity from attack. The condition (congenital or acquired) of the vagus—high or low irritability—will account for this fact also. But, more, some persons ordinarily immune may fall victims when the vagus happens to be unusually irritable through a temporary indisposition, while the exciting cause may be unduly severe; in addition, their normal resistance may be overcome at times either by certain psychic states or by nasal or visual impressions (odors, the wave motion, and the like) acting reflexly upon the pneumogastric nerve. A parallel example is the fact that some persons or others at some particular time require much larger than ordinary doses of pilocarpine to incite its physiologic effects. We also are reminded by these facts that the will virtually is without influence over the vegetative nerves and the organs under their influence.

As to becoming habituated to the sea, Fischer refers to other similar occurrences, as, for example, the rapidity with which the pneumogastric nerve becomes accustomed to the poisonous nicotine in the case of neophyte users of tobacco.

Just how and why the vegetative, and more specifically the autonomic, nervous system should be involved through oscillatory movements of the body, Fischer finds more difficulty in answering categorically. However, he asserts, following L. R. Mueller, that the vegetative system can be excitated by a primary sensible stimulant, even though this is not consciously recognized. Then he assumes, as already has been pointed out, that the exterior impulse conveyed by the ship's oscillations conditions a disturbance of the energetics of the tissues, a rapidly passing alteration in their molecular mechanics as defined by Rossbach. Then, further, possibly these internal disturbances may preeminently affect the autonomic nerves by virtue of an elective "affinity."

Moreover, and principally, naupathia possibly manifests itself predominantly as an irritation of the autonomic nervous system, because unpleasant symptoms produced by irritation of the sympathicus, or pneumogastric nerve, are comparatively light; while the decidedly disagreeable effects resulting from undue irritation of the autonomic nervous system are prone to impress us far more vividly. The practical deductions from these presentations, as drawn by Friedlaender (see CLINIC for May, p. 429), will be remembered by the reader, hence, need not be repeated here.

Inasmuch as the nomenclature employed in this presentation may confuse those students who have not kept in very close touch with latest research-work in physiology, and consequent modifications of older views, it is possible that sometime we may recur to the subject of the sympathetic nervous system as now classified.

However, in order to aid in a clear understanding of Fischer's theory in all its bearings, the following brief explanation may not be amiss. Since the labors of the Englishman Langley, and of other later research-workers, the sympathetic nervous system, as it has been known—in contradistinction from the cerebrospinal, or central—is coming to be recognized as the vegetative system (also as ganglionic), while the term "sympathetic" has been confined to that division classified as the dorsolumbar, with its visceral branch-chains. The rest of the ganglionic system has been named the autonomic system, because of being independent from the central nervous system; it also is referred to as the parasympathetic. But this autonomic system again is subdivided into the midbrain autonomic, the bulbar autonomic, and the sacral autonomic systems, these not being identical in structure and as to function.

BIG BUSINESS AND HEALTH

There is published in Atchison, Kansas, a periodical—half newspaper half magazine—under the title of *E. W. Howe's Monthly*, and it is distinctly original and worth while. We do not know just what the policy and motives of the publication may be, but it really is a very sane and wholesome presentation, in not too solemn a vein, of the unpopular side of things, which is exceedingly refreshing, not to say salutary, in these days of popular socialistic clamor.

In a recent issue of this remarkable periodical (and for which we recommend our readers to subscribe—you get a year's subscription for ten cents, a life subscription for a dollar), the editor drew a very terse comparison be-

tween the politician and the business man, especially between the political reformer and the much-abused "big-business" man.

In brief, his argument was this: The real test, after all, of any man's or any institution's usefulness is his or its influence upon actual living-conditions; the old test, in short, of making two blades of grass to grow where but one grew before. Judged by this criterion, he pertinently asked, what had any of the political reformers, from the President down, or any of their reform measures done to claim any public recognition? Not one of them had made actual living-conditions the least bit easier or better. One business concern, the editor declares, that may have given employment to a large number of men is worth as much as all the former.

Curiously enough, on the heels of this preachment from Atchison comes an editorial in a Chicago daily paper noted (we had almost said notorious) for its socialistic tendencies and its bitter animosity toward capital, and points a special instance of this same truth in the case of the Rockefeller Institute. It cites the fact that John D. Rockefeller has given 12½ million dollars for medical research, and then justly asserts that "the fight made against disease in the Rockefeller Institute is the most scientific and intelligent made anywhere in the world." The paper then goes on to point out that this represents, in reality, a sort of trust which the great oil-king has undertaken of the people's own resources which the public itself was incapable of handling for its own advantage.

"The people of the United States," says this newspaper further, "gave the oil and many railroads and other industries of the country to John D. Rockefeller, and he, in return, like a sort of benevolent financial providence, is giving the people health for the millions that they gave him."

"The bargain that the people made," continues the writer, "was a good bargain. They may congratulate themselves on having given to Rockefeller millions of dollars' worth of oil and taken from him in exchange tens of thousands of millions of dollars' worth of health. He may own an ocean of money, but he isn't drinking it up, wasting it, and pouring it down a rat-hole. It will all be here when he is gone; and meanwhile he is using it for the people considerably better than the public servants use the public money for the people."

To all of which we say an earnest Amen. In the midst of the popular outcry of criticism and abuse which it is the fashion nowadays to raise against the big business man—and without prejudice to our own right to criticize some of his acts and his methods—medicine, at least, should recognize the splendid aid that Rockefeller has contributed to the great twentieth-century crusade against disease and death, and the equally great campaign of health conservation. Without the generous and far-sighted cooperation of these big men—for they are big, whatever else they may be—not half, no, not a quarter of the magnificent work of the last twenty years in this direction could have been done. And we physicians should be the first to acknowledge the debt.

More than that. The influence and cooperation of the big business man in this matter have given to the whole movement an economic status and impetus without which no movement ever achieves world-wide or permanent progress. It is because these men have recognized the value and importance of health as a public asset, and the safeguarding of health as a public investment, that they have given their thought and money to the movement at all.

This is the significance of what might seem an anomalous phenomenon, namely, that this "commercial" age should be the one in which so apparently philanthropic a science as medicine has received the greatest impetus. In more romantic, utopian times, health, like life, was counted a thing to be lightly thrown away. In these days, it has a market value. And, repugnant as it may be to our fine sensibilities, health and medicine have to be commercialized or at least given an economic standing in order to be entered in the list of world-processes.

"It seems that either extreme of soft and polished or rough and brutal manner can succeed with a physician." —Miss Edgeworth, in "Patronage." Happily, the "rough and brutal" are going out of fashion in these times, in this country.

NEURASTHENIA

Although neurasthenia has been denominated the American disease, it is as well known in Europe as it is here. In France especially, Beard's disease, as it used to be called, has received attention and its causation has been studied.

Many cases depend exclusively, it is thought, upon excessive intellectual labors, such as, for instance, preparing for examinations. Under the pressure of anxiety, apprehension for the possible results, consciousness

of the many gaps in the candidate's knowledge, and long hours spent in the endeavor to acquire what may be demanded, and more especially the neglect of personal hygiene that is inevitably the case, it is little wonder that the unfortunate young man comes to the ordeal in a state of mental and physical exhaustion that seriously interferes with his capacity to display what erudition he really possesses.

Heredity has some influence; and the son of a neurotic mother is more likely to fail at the critical time than he whose parents are of a more stolid type. It is with these children that the benefits of a good training are inestimable. A wise régime, accustoming the boy to endure disagreeable things without allowing them to impress him unpleasantly, goes far in obviating the malefic inheritance. The daily cold bath, the gentle but persistent push out of the solitude of his rooms to the society of his fellows and the rough but wholesome discipline of the play-ground harden the skin and subdue the tendency to undue delicacy.

It is one of the grave faults of our educational system that so much importance is being placed upon examinations. Designed to ascertain the degree to which the student has been able to assimilate his teachings, that the capacity of teacher as well as of pupil may be estimated and the faults of both corrected, the pupil is allowed to put himself in the attitude of a prisoner at the bar, whose future depends on his success in proving himself innocent. Actually, nothing in an examination is of as much value to the student as the discovery of a defect of which he has been unconscious, and which he has now the opportunity of remedying. How often has one been found who saw this truth? Instead of this, the poor boy who misses a question feels that he is "lost."

The principal direct cause of neurasthenia may be found in the neglect of personal hygiene. One of the strongest indictments of the modern school is the fact that the graduates of medical and nurses' colleges come to these final trials in such a state of exhaustion as to make one wonder what they could have been taught, that the essentials of sanitation have been so wofully neglected. If one percent of the time wasted trying to teach them things they never by any possibility can utilize in after life were devoted to instructing them in the art of understanding their own bodies and how to keep them in health, great good would be effected. The nurse or the doctor who has broken down under the strain of preparation is not less absurd than the bald-headed man selling hair tonics.

The neurasthenic always is constipated. In dealing with this condition, the general rule in dosing this malady must be followed, namely, that the smallest doses and the mildest remedies effective are to be chosen. A peristaltic tonic consisting of minute proportions of aloin, atropine, strychnine, capsicum, and emetine answers better than any single remedy. A little mild saline laxative in the early morning sweeps out the tract, without weakening, or unduly hurrying the nutritive current through the bowel. These should be aided by a diet containing a large proportion of fresh fruit-juices, best taken raw, to secure the benefits accruing from vegetable nucleins. But all these men are undernourished, and their slight digestive powers make them difficult to feed sufficiently. The artificial digestants are needed in full doses, especially papayotin.

The nervous debility demands fats; and codliver-oil comes in these cases pretty close to the ancient conception of the elixir of life. But the patient can not take it; or any other fat that he can taste. If, in this day of hurry-and-cut, one has the patience to rub this oil into the skin every day for a month, he will have had a lesson, as to the value of drugs, that will go far to dissipate any therapeutic pessimism.

The digestive troubles have attracted attention abroad, where gastralgia, dilatation of the stomach and the enteritides are sometimes recognized as causes of neurasthenia, sometimes as results. Both contentions are right, as a vicious circle is established; and the weakened digestion and the exhausted nervous system mutually react upon each other. So with the visual derangements, where the ill effects of a congenital defect are enormously exaggerated.

Sargent attributes much of the difficulty to suprarenal deficiency. This probably is true in some instances, but there seems no good reason for ascribing to these organs the exclusive qualification to induce such disease. The liver is more frequently at fault. The sexual organs are nearly always affected; but here also it is difficult to distinguish between cause and effect. The absurd importance attached to sexual faults by the earlier observers has been discounted by calmer consideration, and Acton's gloomy views would now only excite derision. The pronounced debility following every sexual indulgence by a neurasthenic is character-

istic of the effects following any exercise of functions demanding much exertion on the patient's part.

In the treatment of neurasthenia, we must ever bear in mind the feebleness of the patient's reactions and the speedy exhaustion of irritability by very moderate doses of any remedy. Careful, cautious treatment of every disorder that in itself may be a cause of debility, the removal of every possible leakage of nerve-force is a task that demands systematic, minute personal investigation rather than generally applicable remedies.

The milder tonics replace strychnine here; and quassia, scutellaria, cypripedium, and especially xanthoxylon fill the need in a manner to surprise those who are accustomed to look on these feeble remedies as unworthy of serious consideration. Caffeine valerate is a useful nervine for moments of special debility. Nervous irritability responds better to sumbul, the valerates, cicutine hydrobromide, and monobromated camphor than to the alkali bromides. Sleep is secured by digitalis better than by hypnotics.

Febrile temperatures respond quickly to anemonin rather than to aconitine. Quinine invariably is harmful, as are the salicylates and anilines. Many times calcium hunger demands salts of that element, the lactophosphate or the citrate. Sometimes a week of zinc phosphide, a milligram only, seven times a day, gives a desirable fillip to the nerve-centers and makes subsequent medication more efficacious.

I have said nothing of the non-drug methods, because these usually are too tiresome, too expensive, too tedious, and too ineffective for this malady. Yes, I mean just what I say; and I defy their advocates to prove me wrong.

The treatment here advocated may be, in a sense, preliminary; but it is so in the same manner that the well-laid plans of the general insure a victory before the first gun of battle has been fired or as the preceding moves on the chess board make the checkmate possible. Yet, I believe there is a distinct specific remedy for neurasthenia, applicable in every case, filling a need felt by every patient—that remedy is nuclein.

After having been shoved aside by a succession of newer organic remedies, nuclein is now beginning to justify the faith of those who clung to it regardless of the waves of popular fancy. Here and there are cropping up experiences like that detailed by Hauber in the July number of CLINICAL MEDICINE, that are significant.

The dose of nuclein in neurasthenia should not exceed 30 minims of the solution, divided, a day, and should be given hypodermically or under the tongue. It should be continued for a month before any estimate is made of its effects; for, whenever we seek to replace a pathologic condition by a natural one, we must follow nature's methods, which never are violent or hurried.

The results will depend upon the discretion and knowledge with which the treatment is applied. No malady demands the personal equation to be applied with more care than neurasthenia; and the same agencies may cure one case and wreck another.

I have great admiration for the man who does things, and also for the man who gets things done; but I have little respect for the man who makes unreasonable demands.—The Caxton.

OUR SPECIAL NEWS FROM THE WAR ZONE

CLINICAL MEDICINE is peculiarly fortunate in having two representatives in Europe at the present time who, we hope, will soon be in a position to supply us with intimate pictures of such phases of the war situation as will appeal particularly to readers of this journal. Dr. H. J. Achard, a member of our editorial staff, was in London when last heard from. He is believed to be somewhere on the Continent, although we have been unable thus far to determine his exact location. We can promise for Dr. Achard a number of articles relative to the Continental aspects of the war.

Our other representative is Dr. N. S. Mayo, director of the veterinary department of the Abbott Alkaloidal Co. and secretary of the American Veterinary Medical Association. Doctor Mayo is now in London. He went to England the latter part of June to attend the International Veterinary Congress. We are depending upon Doctor Mayo to furnish us with a number of stories of English life and sentiment as affected by the great European war.

We also count among our friends a number of other able physicians who are in Europe at the present time. We shall hope to receive from some of these gentlemen, in due time, articles descriptive of their experiences. Our friends can depend upon us to give everything possible of special interest to physicians in connection with this unprecedented crisis. We are endeavoring to secure some special articles by experts upon the medical and sanitary aspects of the war.

Leading Articles

Macrotys Racemosa

A Useful American Remedy

By Finley Ellingwood, M. D., Chicago, Illinois

Editor of "Ellingwood's Therapeutist"; author of the "Treatment of Disease," and "Materia Medica, Therapeutics and Pharmacognosy."

EDITORIAL NOTE.—Next month we shall publish a paper from Doctor Ellingwood's pen upon "Painless Labor: How to Attain It." It promises to rival in interest the fine article upon Macrotys, presented herewith—and that is saying a good deal.

MACROTYS racemosa is the plant commonly known as black cohosh; it also bears the older botanical name of cimicifuga racemosa. The concentration is a resinous, slightly odorous powder of a dark-brown or brown color and a bitter, acrid taste. It possesses all the medicinal properties of the root, and in this differs from an alkaloid. Its dose, under ordinary circumstances, is from 1-2 to 3 grains (or even as high as 5 grains may be given), and is to be repeated several times. Of the fluid extract of the whole plant, from 5 to 30 minims are given. Of the tincture 30 minims, 1-2 dram.

In prescribing macrotys, the physiological action of the plant should be borne in mind. Some patients are much more susceptible to its action than others. That quantity which would be a proper dose for one woman would be found altogether too large for a susceptible person. The first symptom from excessive dosage as a rule is frontal headache, occasionally supraorbital. Later, there appears a general relaxation similar to that following heavy doses of the bromides, dimness of vision, dizziness, tremors, slowing of the pulse, while extreme prostration will follow marked overdoses.

This drug seems to act upon the vasomotor centers and the cardiac ganglion. The appearance of the characteristic headache, which soon assumes a bursting and tearing quality, together with injected conjunctivæ and flushed face, demands a suspension of the remedy. These phenomena will soon abate, as the remedy is quickly eliminated—as are most vegetable remedies.

I will say further concerning the action of this remedy that not alone upon the womb does it seem to exercise an influence similar to that of ergot, but equally so upon all unstriated muscle-fiber. I believe that its effect upon the arteries and arterioles, upon the veins and venous capillaries—in fact, upon the total capillary circulation—is similar to that of ergot. And especially is this true of the capillary circulation of the brain; the evidence of which is, the quickly engorged condition just mentioned, and which results in headache.

In addition to this influence, the remedy exercises a direct influence upon muscular fiber. I do not pretend to be able to describe this influence, but I have watched it for thirty-five years in every form of muscular trouble, and I am positive that, with close observation, better observers than I am will yet be able to determine a very exact but broad, satisfactory, and important influence upon conditions of the muscles for which we now have no specific remedies.

I have been especially pleased with the action of macrotys when combined with cactus or with cactus and gelsemium in the treatment of those conditions of the heart that often follow rheumatism or that occur from other causes in which there is flabbiness of the heart-muscles, dilatation, sluggish systole, and consequent impairment of the general capillary circulation. I accredit this largely to its action upon muscular fiber.

In many cases where I have decided to use cactus as a remedy for faults (weaknesses) of the heart-muscle, I have thought that I

have obtained a more speedy result by combining it with macrotys. I may say more of this action later on.

Its Great Value in Muscle Pains

For first specific indication for macrotys we have muscular faults. The first is, muscular soreness from any cause, either violent muscular exercise or from straining or from direct traumatism. One physician who had not ridden a horse for many years rode 40 miles at one stretch in haste, and with confidence in this remedy took 20 drops of a strong preparation (of course repeating the dose once), and he enjoyed an almost entire absence of soreness and felt no general discomfort whatever.

The first symptom is muscular aching. This may be local or general. There may be aching pains in the muscles from any cause—the sore, aching or strained condition of overworked muscles. Especially correct is this symptomatology concerning that form of muscular aching which is accompanied by chilliness, malaise, and increasing temperature.

Another indication is aching or lameness of the deep muscles of the back from any cause; especially if in conjunction with lameness or soreness in the lumbar region; there will be found a disordered condition of the kidneys. General backache in its various forms is more often relieved by macrotys, especially if it is combined with gelsemium, than by any other remedy in our materia medica. It is indeed a reliable remedy.

Macrotys With Gelsemium: A Happy Combination

Mentioning it in conjunction with gelsemium, I am reminded of the fact that the reader should know that there seems to be a peculiar harmony of action between these two remedies in a great many conditions. In most of these, both the muscular and nervous system is at fault, and, as these remedies are respectively the most specific remedies we have for these two conditions, they will be found to work harmoniously, reliably, quickly, and with very much satisfaction when correctly prescribed.

For many years I have depended upon these two remedies (macrotys with gelsemium) for lumbago and other forms of backache, as well as for sciatica, and especially for the various forms of tic. Hot applications in acute cases of these disorders and the persistent use of these two remedies, up to their full physiological action (cerebral fulness for macrotys, eyelid ptosis for gelsemium) will produce most excellent results.

Concerning the use of this class of remedies, I will digress a moment by saying that those physicians who have not had long experience with them are not likely to secure the full satisfying result that those obtain who have prescribed them a long time. This failure is altogether owing to the lack of confidence and of persistency. The prescriber must thoroughly believe that he will get results and then must prescribe with this confidence and push the remedy until the desired results are attained. A few cases carried through with this confidence and persistence will insure a faith that surely will bring results later on, far exceeding those formerly obtained from better-known measures.

Suppression of Urine

The most startling results I have obtained from the combination of gelsemium and macrotys was in the treatment of urinary suppression—a cessation of renal secretion. I have met—either in my own practice or in consultation with other physicians—with five cases of abrupt and almost complete suppression of urine from profound toxemic infection after confinement, occurring either immediately or within four or five days.

This in each case occurred without any evidence of inflammatory action or even elevation of temperature, at least at first. The extreme danger in a case like this is not, as a rule, appreciated. The fact that all at once the physician and his patient are brought to the edge of a horrible precipice, from which the patient is almost sure to be plunged, does not occur to the prescriber, unless he has had one or two previous fatal experiences. If, on the other hand, he has had such experiences, he will attack the situation with a sad lack of confidence, and often with a dread of the anticipated fatal ending. I have encountered only five such cases, as already said; but, as every one of these patients recovered most satisfactorily, not later, contracting kidney lesions, naturally I have become fixedly established in my confidence in the "bridge that has carried me over."

The same treatment was used in every instance. Persistent hot applications were made to the patient's back, over the kidneys. There was no cessation or let-up in these applications from the moment when they were first applied until there was a fair secretion of urine. In one case, this demanded 120 hours of consecutive heat; the recovery, however, justified the course. The patient

was kept under the full effect of my two remedies, macrotys and gelsemium, varying their dosage only as demanded by the undesirable appearance of their respective physiological action.

Besides those named, the careful prescriber will find other indications that must be met, inasmuch as these patients demand the closest watching; and this the more so, since in some of the very acute cases the patient will not even believe that she is seriously ill. Cerebral manifestations must appear or other violent symptoms, notably those of toxemia, before the friends can be convinced that the condition really is alarming; and these facts may materially interfere with the execution of the extreme measures the physician prescribes, they believing that his suggestions are unnecessarily severe.

In the treatment of acute inflammation of the kidneys from cold or other causes, in which there is more than a primary suppression (in which there is every pathological factor of an acute inflammation), the course here outlined is equally efficacious. There may be an exception to this in that form of suppression which occurs subsequent to the infection of scarlet-fever or diphtheria. There seems to be a difference in the developing pathology in this class of cases, which will demand other treatment besides this course, but detailing of which would perhaps be out of place here.

Febrile Conditions

Going back to the primary, first-named symptomatology attaching to the use of macrotys, this muscular aching in acute fevers is one of the very common premonitory symptoms. The raised temperature and the tendency to chills are not always present in the same relative proportion as the amount of aching. However, for this aching or muscular soreness, from 1 to 3 drops of the tincture of macrotys in a teaspoonful of water, given in conjunction with the prescribed remedy for the temperature, should be administered every hour or two.

Where the muscular complication is so great or arthritic inflammation seems to threaten, so that an acute muscular rheumatism or acute rheumatic arthritis is diagnosed, this remedy is always indicated. However, its effects are more prompt and more plainly apparent where the muscles are involved than where the structures of the joints alone are affected.

In acute rheumatic fever, it is more than likely that there is no one remedy that exercises so decidedly favorable an influence in its general action as does macrotys. It soon becomes popular with anyone who relies upon it.

It is more than likely that this influence, although in part owing to the direct selective action of the remedy upon the muscular structures, is greatly enhanced by the fact that this agent exerts a direct influence in overcoming lithemic conditions. Whenever such a condition exists in the system, more or less benefit can be obtained by prescribing macrotys. The uric acid diathesis seems to yield to this remedy in a large percentage of the cases.

Wherever muscular rheumatism exists, it should be antagonized with macrotys, whether this be in the walls of the chest, in the muscles of the neck, or the ache of the deep muscles of the back; in myalgia, in the extreme muscle stiffness induced by severe colds. In neuralgia from colds, in rheumatism, headaches, or in the intense muscular pains that in many women often precede the menses, this remedy can be depended upon.

Uterine Disorders and Pregnancy

The foregoing facts suggest the action of macrotys in the ordinary disorders of women such as dysmenorrhea (especially that of a congestive character), in amenorrhea, and in subinvolution. The latter condition follows a few days after confinement, in some cases where the patient has contracted a cold. There is slight chilliness, some temperature (usually not high), and stiffness, soreness, and general aching throughout the muscles of the thighs and those enveloping the entire pelvic area. There also may be an increased lochial discharge or the lochia may be suppressed.

I have overcome this entire train of symptoms by using a stimulating course of frequent doses of macrotys and by the application (every twenty-four to forty-eight hours) of a mild current of faradic electricity. It is surprising how beneficial faradism is in these cases, especially if after five or six weeks there has been no abatement in the condition or no improvement in the process of involution.

In the hysterical manifestations common at the menstrual period, muscular aching often is present, together with many of the phenomena that are symptomatic of the action of pulsatilla, especially if there should be amenorrhea. Under these circumstances, these two remedies (macrotys and pulsatilla) should be combined.

I have found a most desirable influence exercised by macrotys for conditions occurring during the pregnant term, where there were irregular pains, uterine distress, and inclination to fetid leucorrhea, in connection with a flabby condition of the muscular structures and the frequent occurrence of general aching as if from muscular atonicity.

The needed effect of macrotys is satisfactory at this time; but its most desirable influence is that which prepares the muscular structure of the patient for the ultimate expulsion of the child so efficaciously as to reduce very materially the painful evidence of muscular irritability in the expulsive effort. With the assistance of other simple remedies that may be indicated, it puts the entire machinery of expulsion into such a state of smooth running and efficiency, like the ball-bearings of some delicate machine, that all undue influence is done away with and the patient gives birth to the child in an exceedingly short time, with comparatively little pain—in fact, as I have stated in my article on the preparation of the mother for labor, in a number of cases with so little pain that the patient could not afterward recall that she had had any pain at all.

I consider this influence of these remedies among the most desirable of any of the remedies that I have prescribed, and I court criticism and careful comparative observation on the part of every intelligent physician in line with my own observations to determine how nearly correct I am in my conclusions. I believe that such comparative actions will not only prove my statements to be true, but will greatly enlarge the therapeutic field of these two excellent remedies.

Macrotys as a Parturient

Right here I desire to say a word for macrotys. I hardly can realize that under ordinary circumstances a physician would need any other *partus accelerator* than from 3 to 5 grains of macrotoid, repeated every hour or two, where there is suspension of labor-pains and muscular inactivity. This remedy has acted so beautifully for me and has accomplished so many desirable results for my contributors (*Ellingwood's Therapeutist*) that confidence has only been more firmly established.

As a matter of fact, macrotys produces a gradually increasing muscular power, which shows itself, however, with the increasing expulsive character of each pain, but with no disturbance of the perfect regularity of the pains. It is entirely devoid of the forceful, persistent, and often undesirable character of the expulsive pains induced by full doses of ergot or pituitrin.

Among my first confinements, nearly forty years ago, I had one patient who was suffering from powerful labor-pains, with almost no intermissions. I knew nothing of the indi cations at that time, but not being able to find any evidence of immediate expulsion of the child, I gave 5 grains of macrotoid, and repeated it in an hour. Instead of increasing the pains, which were at that time most undesirable, as there was no dilatation (as afterward discovered), the remedy removed every pain, and with the help of a warm bath produced a tranquility which greatly surprised me.

I soon convinced myself of the fact that the patient was not yet ready for labor and that a severe rheumatic condition of the entire muscular structure was present. This was overcome with proper treatment, and the confinement occurred two weeks later with none of these complications, and terminated favorably.

In Angina and Eclampsia

There are certain forms of angina pectoris in which macrotys is directly indicated, being in line with the statements I have already made upon its action upon the heart. I believe it is those forms of angina which result from rheumatic infection of the endocardium or pericardium or irregularities of the heart dependent upon muscular faults. There certainly are frequent cases of angina where four doses of macrotys, or of macrotys and gelsemium, or macrotys and hypodermics of lobelia will secure immediate relief, and, if given when subsequent attacks are anticipated, will greatly lengthen the intervals between attacks.

Another action of this remedy which is most reliable is in preventing eclampsia and in antagonizing those conditions that subsequently end in eclamptic seizures.

I have had the benefit, not alone in my own observations, but of those of Prof. E. J. Farnum, of Chicago, for many years, in watching the effect of macrotys, either alone or in combination with gelsemium, in this class of troubles. In many cases we have had every assurance that our patient was developing the nephritis of pregnancy, and a urinary analysis confirmed the diagnosis. In these cases, a very simple course, persisted in, of these two remedies, with the proper adjustment of nitrogenous foods and other dietary measures, has relieved the con-

dition, removed the symptoms and restored normal renal activity. So frequently has this occurred that we depend with confidence upon this simple combination.

If backaches and renal inactivity are pronounced, we make the hot applications across the back above referred to. If renal secretion is only slightly deficient, the patient is advised to sleep each night on a rubber water-bag, partly filled with hot water.

In one patient, where muscular twitching was pronounced and the sthenic headache was so severe, four months in advance of the anticipated labor, that convulsions seemed to be threatening at almost any time, with considerable albumin in the urine, this course did away with every evidence of the conditions in a little over a month, and left the patient in perfect health; while in two subsequent confinements it prevented the occurrence of any of the symptoms.

In Gonorrhea and Stricture

Another excellent use of macrotys, alone or with gelsemium, is in the treatment of acute gonorrhea. If immediately begun, injections may be avoided entirely. If the discharge has continued some days, injections of potassium permanganate, or irrigations, through a carefully introduced catheter, with 1 : 12,000 or 1 : 16,000 of mercury bichloride may be made once in two or three days, having the urethra cleaned before introducing the sterilized catheter.

Still another important service this remedy will render the prescriber is that of relaxing urethral or ureteral strictures. I have a history of cases where, because of acute gonorrhea, a catheter could not be passed even after chloroform had been administered, but where the administration of macrotys and gelsemium in very full doses has produced such satisfactory relaxation that in less than two hours there was spontaneous urination.

There are certain cases, also, of renal stone and gallstones where these two remedies can be given with great advantage, if operation is not demanded. I not only prescribe these two remedies in gonorrhea, but I have obtained excellent results from continuing their use during the early stages of gleet; and later, with the use of staphisagria or kava-kava, I have obtained complete cures.

To close this long article, I will say that the statement I made concerning confidence in the action of this remedy is necessary. In my early experience, not knowing its systematic action, I often failed to discover results, and I should have lost confidence in the remedy had it not been for the positive assertions of my confrères who by long experience had learned its desirable properties. One physician told me a few days ago that this was one of the remedies that he absolutely could not spare from his case if he practiced medicine.

I would further reiterate my belief in the fact that macrotoid will exercise all the influences of any good fluid preparation I have used, if given persistently in carefully adjusted and frequently repeated doses. Let it be further borne in mind that the preceding suggestions do not exhaust the field of this valuable remedy, by any means.

EVERYTHING that has been done well has been done calmly. Many things that have been done poorly owe their failure to the haste, or lack of calmness, with which they were performed. This peace of mind which helps to win battles is a habit that can be formed by those who are willing to cultivate the tendency to forget rather than fret about trivial mishaps. It is a fact that many people who are strong in meeting great emergencies lose control over themselves as soon as little things go wrong.—JOHN R. MEADER.

Observations Over Seas

Brief Records of a European Trip

By Henry B. Hollen, M. D., Chicago, Illinois

EDITORIAL NOTE.—Doctor Hollen made his trip abroad in the winter and spring of 1914, returning to this country some weeks before the breaking out of the war. In view of recent developments his observations are of special interest, since they give an intimate picture of some phases of the European life now passing. As to the Europe of next year, that is "in the lap of the gods."

LAST month I returned from Europe, and it occurred to me that some of the readers of this periodical might like to hear, or, rather, read, about some of the observations I made over there, since they may be helpful to prospective transatlantic travelers.

I did not go to study, as many of my profession do. I was on pleasure bent, in the main; still, as I went I gathered material for two books, now in the incipient stage, along sex lines. What I write here, therefore, will be a sort of a series of travel notes, diverse and disjointed, while, yet, related more or less closely to medicine.

I was gone nearly five months, and in that time I covered about as much ground as one can comfortably cover, that is, about half of Europe; and at the start let me advise the prospective traveler not to go to Europe unless he can spend at least five months there. It is a mistake to do otherwise; for it means hurry, fatigue, mental confusion, and regret when it is all over. A trip abroad is, for most people, the one and only such trip; it is not repeated, as a rule. Only those of ample means can indulge in several transatlantic journies. On this account, one should try to make the most of the single opportunity, planning to stay just as long a time as possible.

Travel is not enjoyable nor profitable unless one travels leisurely. Deliver me from a flying-trip! I have seen many a victim of the tourist-agent doing Europe in six weeks. They always were a wretched, perspiring, and weary-limbed lot. No wonder they have become material for the comic papers. My advice applies still more strongly, of course, to those who go to one of the medical centers to study; all such should go for not less than a whole year.

The Expense of Living Abroad

Aside from the greater comfort and enjoyment derived, a long stay is relatively the cheaper, as one can take advantage of hotel rates or else rent a small apartment and arrange for light housekeeping; the latter being the most economical.

On several occasions, I fell in with doctors returning from postgraduate work at Berlin or Vienna. One of them was accompanied by his wife and son. They had rented a furnished flat of four rooms and lived in it a whole year, as they said, comfortably and inexpensively. Such accommodations are especially plentiful in Berlin. This doctor told me that help was very cheap, also; for two dollars a week they hired a domestic who did the cooking and did practically all the housework. Table-supplies cost just about the same as they do here in our country.

Living in hotels is somewhat cheaper than here, but one must pay in the neighborhood of two dollars a day for a desirable room, with three good meals. In Switzerland, it is possible to live for a little less; so also in Holland.

My experience taught me that the boarding-houses ("pensions." they call them), as you find them abroad, are impossible for people accustomed to good living. I tried them in three places—once in Nice, once in Paris, and once in Brussels—however, the longest I was able to "stick it out" in any one of them was three days. In the conventional guide-book, these pensions of Europe are recommended to those who cannot afford a big outlay; but they are very much overrated. One night's lodging and breakfast generally is enough to convince any deluded American venturer that they are not for him.

European Travel Is Not Cheap

Very recently I saw in one of the magazines an article contributed by a lady on how to see Europe on a dollar a day. It certainly was funny to me who knew better. It would not be funny at all, though, to the traveler deceived by her into going abroad with scant funds based on her advice. To find yourself short of money among strangers, thousands of miles from home—to be obliged to scrimp or ask charity—that is mighty

embarrassing. The lady who wrote that article regarding the all-sufficiency of a dollar was either working in behalf of the transportation companies, or she was one of those who love to lie, or she was so unaccustomed to the good things of life that the steerage actually seemed pleasant, by contrast.

This shows how little one can rely on what he reads, as also does the next incident. Before going over, I read a travel-book, in which the statement was made that a franc in the south of France would go as far as a dollar in America. This is a ridiculous statement. Living is very expensive in that part of France, and, counting everything, is fully as costly as in the cosmopolitan resorting places in our own country. For, owing to its mild winters and healthful climate, the whole of the Mediterranean coast (the Riviera) is one big resort to which the fashionable folk flock from the four quarters of Europe, and, in fact, from all over the world. It is a land of regal hotels, of fine shops, of sumptuous "kursaals;" and with a winter population in search of pleasure, with scant regard for the cost. Consequently, the sojourner here must expect to pay dearly for all he gets. His laundress will demand an extravagant price for her work; the tailor will ask a dollar for simply pressing his suit. Little or nothing is cheap.

Troubles of Two American Girls

Into my little hotel in Paris, on the Rue D'Antin, one evening, just after dinner, came two American girls. They looked tired—and lonesome—and bewildered. They said they had just arrived that morning. They were from Cleveland. They knew nothing of the French language nor of the value of the Gallic coins in their purses. They had walked for hours looking for a hotel. But everywhere they went the price demanded was more than they could afford to pay; it was clear, from their talk as well as appearance, that these two had but modest means.

Almost tearfully and deploringly they now inquired of the concièrge whether they might have a room for a dollar a day. The concièrge would see—he could speak some English. Yes, the manager had a small room which he would let at that rate, if they would remain at least eight days. Poor girls! They had a tale of woe to tell.

They had conceived the idea of a short vacation abroad. It would not cost much, they were told. The tourist agent to whom they went, confirmed this. They might go third-class on the line he represented, he suggested. The accommodations were just as good as second-class on most boats. He assured them that the voyage across would be very pleasant. They bought tickets and started away. When they got on board they found that third-class was really steerage It looked awful. They could not think of crossing the Atlantic in such quarters and in such company—a low class of foreigners They saw the purser and bought a second-class cabin, paying a considerable difference. The result was that these two inexperienced girls landed at Cherbourg with depleted purses, making it necessary for them to husband their remaining resources. Luckily, they had relatives in England, to whom they finally decided to appeal for money.

This is only one case that came to my notice of people tripping to Europe, with the idea that trip-making is cheap there. But this thing happens every day. The lesson to be learned is this: Have plenty of money with you when going abroad, and have it in readily convertible form. A fair estimate of the total expense would be not less than five dollars a day for each person while traveling on land, and ten dollars while traveling on water.

The Trip Across the Water

I was two weeks crossing—by the southern route. I chose the Fabre Line and can recommend this line above all others. Two fine new boats are in service between New York and Marseilles; and the passage rate is somewhat less than that of the larger and more extensively advertised steamship companies. Being a French boat, the cuisine, of course, is French; and excellent. They give their patrons more than enough to eat; and more than enough to drink. Wine is gratis; a bottle of red wine and one of white wine are to be found on every table.

On board, I met Doctor Darcy, from Brockton, Massachusetts. The Doctor proved to be a good companion, although he was occupied part of the time with a patient—neurasthenic—whom he was taking to Nice. He and I played shuttleboard on deck; exchanged novels; and fraternalized occasionally, before dinner, over a glass of Dubonnet. And we saw Algiers together—the old Arab quarter—the mosques—the Soudanese dancing-girls—and all the rest of the sights in this strange and bizarre country. Neither of us shall ever forget those days.

And this reminds me: The pleasures of travel do not actually cease at the journey's end. The memory of those experiences always lives. You can conjure up mind-pictures of your trip years afterward as, perhaps, when you are reading some book, which describes scenes familiar to you. You have been over that same ground—you have walked the same streets—you have eaten at the same interesting café which you find named in this book.

My Visit to Nice

My final destination was Nice, and there I was to remain for sixty days at least, or till the north was fairly out of the grip of winter. Nice is a charming place, with its snow-capped mountains back of it and the beautiful blue Mediterranean skirted by the celebrated Promenade des Anglais—a stretch of five miles—one of the most interesting walks in the whole world when seen in the middle of any sunny afternoon. And it usually is sunny in Nice. Here, is a medley of races, all in the happiest frame of mind, glad to disport themselves for awhile in this favored land.

At the hotel which I selected, I met a Doctor Cunningham. He hailed from New York. He was not in active practice, he said. Some years before, he abandoned medicine, as so many do, and went into music. He had made himself a great favorite in concert and oratorio work. One year he toured with Patti. The Doctor was here to recuperate. He contracted bronchitis last fall, which persisted, so that he finally decided to cancel his dates and seek a favoring clime. When I first saw him he was hoarse, but he made surprising progress. Before I left he virtually had regained his singing-voice.

Those who suffer from bronchial troubles do well here, as also do neurasthenics. The warm and bounteous sunlight seems to work wonders. The sea air helps, as does the leisure which is so easy to indulge in here. The Riviera is the land of idlers. Many an hour have I spent on the Quai Midi (the east end of the promenade), doing nothing more laborious than listening to what the wild waves were saying. Still, who will say that these hours were altogether empty. For there is reward in the ozone-laden air and the glorious sunlight; and there is something more and better, in the world than the coining of dollars and cents. Not a few victims of tuberculosis find their way here from the north; some are benefited to a decided degree. But I fancy that these victims do better in the more altitudinous districts of Switzerland.

Doctor Cunningham was accompanied by his wife, a charming little woman, while Mrs. Hollen soon joined me from London; so, the four of us made a most congenial quartette, especially since the Doctor had been schooled in Chicago and knew the medical center of the West Side, so familiar to me. We took long walks along picturesque country roads; we frequented the Casino Municipale and occasionally risked a few francs at the gaming-tables; and once we motored over the Alps into Italy. In many other ways, we enjoyed the holiday together. We went on shopping-expeditions—to the special delight, I need not mention, of the women. And we took part in the Battle of Flowers, that pretty fête of the azure coast.

A Drugstore Experience

I remember finding the Doctor peeved, one morning, over a petty extortion, such as shopkeepers and others are wont to practice on travelers. He had gone to a nearby drug-store for some aspirin and witchhazel. The druggist charged him 4 francs (80 cents) for a 4-ounce bottle of witchhazel and 5 cents apiece for 5-grain aspirin capsules. This was not all. For, when he spied some weighing-scales after making these purchases, he got on, and was charged 10 centimes (2 cents) for using them. This seemed pretty small—especially after he had just bought and paid exorbitantly for what he got. He said as much to the druggist, but that gentlemen appeared only surprised and hurt—and continued courteous.

The French are always courteous. I have even known a lordly hotel-keeper to ask a departing guest for 2 cents, to cover the government tax on the receipt—a guest who had just paid him 16 dollars in the coin of the realm—and he didn't feel a bit abashed. On another occasion, I was charged, on my bill, 2 cents apiece for extra rolls requested at breakfast on three consecutive mornings.

To us, this small, calculating way of the French is not at all likeable. But it is a national and a natural, trait. It is frugality carried almost to the point of meanness. Dislike the French for it, if you will—they have other traits which you are bound to admire; to-wit: their unfailing courtesy, their artistic sense, and their frankness in dealing with matters of sex. There is not an atom of sex-hypocrisy in their makeup; no prudes among them.

When in Paris, in the Garden of the Tuilleries, I saw nude figures in stone and

marble, which, if set down in a park or square in our country, would at once awaken a howl from our "decent" masses and a thousand blushes of shame. Yet, here in France, the virgin damsel passes these things every day and children romp in plain sight of them. But no one is shocked. And when the Frenchman wants his absinthe he does not sneak into a bar-room and then emerge with a guilty face. No! He takes it in the open, on the crowded boulevard, where all who pass may see.

The untraveled American often is amusing when he lays bare his conception of the rest of the world. I talked with one soon after my return.

"Train service is awfully poor in Europe, isn't it?" he asked.

He didn't know he was displaying ignorance. He has hardly been out of the middle West and he believes the foreign world benighted—backward—lacking the good things of life.

I told him that, on the contrary, traveling in Europe was just as cheap as in this country and very much more comfortable. This was true. But it surprised him.

The next question he asked was: "I suppose you found France very immoral, didn't you?"

My reply to that was even less expected. I told him there was less immorality in France than in America, and less venereal disease. This is true also. And, why not? The authorities regard the commodity of the prostitute as a necessary one. They allow her to deal in this commodity with certain restrictions. She is constantly under police and medical supervision. If one of her kind becomes diseased she is hurried into quarantine, there to remain till she is no longer a public menace. She who tries to conceal her condition and persists in soliciting is penalized. She may take chances, but more likely she will consider it easier and safer to cross the channel and walk on Regent Street.

But enough of this; my data along this line, as well as my experiences in different places, I have written into a book that is essentially a comparative study of the prostitute as found in the various parts of the world.

In Switzerland and Holland

Switzerland is a bright spot on the map of Europe. We stopped a week in Lausanne—a clean and well-ordered city on Lake Geneva—spread over foothills of the Alps—the ravines spanned by handsome cement bridges, maintaining the continuity of its principal streets. It is a city of good schools, and students from near and remote countries are here; you see them everywhere in little groups, wearing velvet caps of many colors. There is a fine hospital here which I looked through. Some world-famed doctors practice and teach here, among them Combé, who was a leader up to the time of his recent demise. His translated works are familiar to us.

There is much to interest the traveler in Holland, such as the green pastures below the sea's level, with their grazing cattle, the canals (the dykes), the windmills, and, in season, that veritable feast for the eyes, the tulip-fields, one after another, each a solid color, red, white or yellow. We made our headquarters at The Hague, the capital. It is a very attractive city, a place where one is tempted to linger. Only thirty minutes away by train, through a wooded stretch, is that celebrated Dutch watering-place Scheveningen, where is a sandy beach that is surpassed by none. From The Hague it is easy to reach the smaller cities, such as Delft (twenty minutes by train), while Amsterdam is only an hour away. But Amsterdam is an ugly commercial city, with little in it to hold the visitor. In the opposite direction, about the same distance away, is Rotterdam—interesting as a port, where may be seen the unloading of many and often strange cargoes.

To the smoker, Holland is a paradise, at least in this regard: tobacco is good and cheap; three cents in our money will buy a good cigar. And the coffee-drinker—he will find here genuine Java, brewed as it should be brewed. And he who loves gin will be satisfied as never before; the world's best is Holland gin.

In the capital city, at the Mauritshuis, I saw Rembrandt's picture titled "A Class in Anatomy." The original is a very large and striking canvas; small prints of it are to be found in many a doctor's office.

A Week in London

From Rotterdam to London is a night's ride by boat. What an impossible people the English! A week among them was quite enough for me. Cold, hypocritical, disdainful to the point of rudeness when he is traveling, is the male. Frumpy, lanky, ruddy-faced, big-footed is the female. It astonished me to find the English woman so neglectful of her person, as compared with her sister across the channel. She is exceedingly unattractive. But if she suits the Englishman, I suppose there should be no complaint from

others. John Bull must be rather easily satisfied. Perhaps he figures that anything English is better than the best of any other blood, in the way of femininity.

The gentry of England really are a simple lot. I looked upon a London street crowd on a holiday. There they were, thousands of them, engaging in cheap fun, amusing themselves with penny toys purchased from sidewalk venders, garnished with paper flowers; such an anemic and poorly dressed populace, comprising presumably a good many clerks delighting in a day's freedom from office drudgery at four pounds a month.

And how these simple-minded folk do grovel to titledom; really, it is nausea-provoking. The goings and comings of royalty, the doings of lords and ladies; such appears to be their bread of life. They devour it daily, the newspapers devoting a large part of their space to chronicling the movements of the nobility.

This inordinate worship of its nobility by the gentry of England is apparent at every turn. You see it in commercial life. The chemist on Fleet Street who once upon a time sold a box of liver-pills to the Duke of Manchester, who in turn gave a dose of said pills to the King when on a certain occasion he was looking very sallow, that chemist makes business capital of this transaction. Henceforth he announces himself as "Pharmacist by special warrant to the King of England and to the Duke of Manchester," and puts the royal coat-of-arms over his door. So, also, the promoter of fake stocks finds it easy to dispose of them to the worshipful public, when he picks one of the nobility for an officer in his company and secures an assortment of noble endorsements.

We often deplore the gullibility of our American public; but, for plain, unvarnished gullibility, the English have us beat. Our American rube is a very sophisticated gentleman as compared with the English yokel. That is why rascals who play themselves out here can cross over there and go right on doing business. Nowhere else do patent medicines take so well and sell so well as there—in Old England.

I found that, on the Continent at least, the use of acetanilid had been almost abandoned as a painkiller or anodyne. A new popular anodyne is pyramidin. This prescription was given to me by a doctor friend in Milan: Phenacetin, grs. 4; caffeine, grs. 2; pyramidin, grs. 4. This is said to be very effective for headache. It is commonly dispensed by druggists in wafers.

On the return trip, by the American line, the ship's doctor was very good company. He had spent a dozen years on the sea in this capacity, and he was extremely efficient in handling all the ailments that turn up on board ship. For seasickness, he pinned his faith on veronal.

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[We print Doctor Hollen's criticism of the English with misgivings. We wish to avoid international complications right now! Fortunately he made no comments on Germany! Needless to say, his opinions are not our own. To try to give an accurate picture of English life and character after a week in London seems as difficult as it would be to write a satisfactory book about America after ten days exclusively on Broadway. However, the doctor's English impressions are interesting.—ED.]

THE BRAVEST BATTLE

By JOAQUIN MILLER

The bravest battle that ever was fought;
Shall I tell you where and when?
On the map of the world you will find it not;
It was fought by the mothers of men.

Nay, not with cannon or battle shot,
With sword or nobler pen;
Nay, not with eloquent word or thought,
From mouths of wonderful men.

But deep in a walled-up woman's heart—
Of woman that would not yield;
But patiently, silently bore her part—
Lo there is that battlefield.

No marshaling troop, no bivouac song;
No banner to gleam and wave;
And oh! these battles, they last so long—
From babyhood to the grave.

Yet, faithful still as a bridge of stars,
She fights in her walled-up town—
Fights on and on in the endless wars.
Then silent, unseen, goes down.

A Study of Aconitine

Its Physiologic Action and Therapeutic Value

By H. Hamilton Redfield, A. B., M. D., Chicago, Illinois

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EDITORIAL NOTE.—Doctor Redfield has promised us a number of his inimitable drug studies. Next month, for instance, we hope to be able to present a paper upon atropine, now preparing. He will give special attention to the alkaloids and other active principles. These contributions will be found essentially practical, and they are based upon an extensive clinical experience.

IN 1833, Geiger and Hesse, while making a study of the chemistry of aconitum napellus, succeeded in isolating a crystallizable alkaloid to which they gave the name aconitine, and which for a considerable length of time was accepted as the only alkaloid present in the plant. However, later research has brought to light the existence of two other alkaloids, named, respectively, aconine and benzaconine. Both of these substances can be made by hydrolyzing aconitine; benzaconine being the isaconitine, and the chief constituent of napelline and of picraconitine, as mentioned by Cash and Dunstan.

Aconitine occurs in the form of colorless or whitish, odorless rhombic plates, or prisms. It is soluble both in hot and in cold water. It is strongly alkaline to reddened litmus, neutralizing acids, and is precipitated from the latter by caustic alkalis, but not by carbonate of ammonium or the bicarbonates of sodium or potassium. It is colored orange-yellow by sulphuric acid, changing to brown and finally becoming colorless. Its solution in diluted phosphoric acid, when carefully evaporated, becomes violet-colored; mixed with sugar, it becomes rose-red in the presence of sulphuric acid.

Physiological Action

Ingested in small doses, aconitine gives rise to a sense of numbness or tingling in the tip of the tongue and the lips, which in some cases, where a susceptibility to the action of the alkaloid exists, may extend to the ends of the fingers and toes, the pillars of the fauces, and the throat; or there may occur a general sense of formication. After increased doses, there is muscular weakness and depression, with intensification of all the aforementioned symptoms; the pulse becomes weak and slow and the respiratory movements are markedly decreased.

Given in toxic doses, there is, in addition to the above manifestations, pain in the joints, vertigo, dimness of vision, marked debility, slow, weak pulse (40 to 50 beats per minute), cold, clammy skin, a sense of heat in the stomach, nausea, vomiting, and purging. Gastric and intestinal spasms may occur, headache, blindness, dilated pupils, general anesthesia, and muscular paralysis. If death supervenes, it is the result of carbon-monoxide narcosis, due to the paralyzing action of the drug on the respiratory center in the medulla and the muscles of respiration.

Aconitine can be classed as an exceedingly powerful respiratory, cardiac, sensory, and spinal depressant; a diaphoretic, diuretic, and antipyretic. Its action seems to be chiefly exerted upon the peripheral ends of the sensory nerves, but it also exercises a paralyzing action upon the motor nerves. However, the sensory nerves are the first to come under the influence of the alkaloid, and this action proceeds from the periphery inward; and it is not until the induced paralysis has traversed the sensory nerve and reached the center (which also participates in the paralysis) that we see any evidences of motor paralysis, the drug eventually producing complete loss of sensation (paralysis of the sensory side of the arc) and abolition of function (paralysis, reflexly, of the motor side of the arc). Section of the sensory nerves in rabbits has been followed by a loss of sensation or motor paralysis when crystalline aconitine was applied over the area supplied by the severed nerves.

Under the stimulating action of aconitine upon the cardioinhibitory center, the heart is slowed and steadied, the action in this instance being slightly like that of digitalin, that is, a decrease in the rate of the heartbeat.

A Comparison of Aconitine and Digitalin

A close comparison of the physiological action of the two principles named (aconitine and digitalin) will, however, show some very marked dissimilarities.

Aconitine first stimulates, but later relaxes inhibition and depresses the cardiac apparatus. Digitalin relaxes inhibition and stimulates the cardiac muscle. Aconitine paralyzes the

heart by direct depression. Digitalin paralyzes the heart by overstimulation. Aconitine arrests the heart in diastole. Digitalin arrests the heart in systole. Aconitine lowers arterial tension. Digitalin raises arterial tension. Aconitine acts very rapidly. Digitalin acts very slowly—a fact which makes it of little value in the role of an antagonist in cases of aconitine poisoning.

Both slow the heart; otherwise they antagonize each other.

In therapeutic doses, aconitine exerts an inhibitory action upon the respiratory center, resulting in a slowing of the respiratory movements, which may become labored and dyspneic. By some observers these conditions have been ascribed to a bronchoconstriction, owing to stimulation of the vagus endings in the lungs; but, the death from asphyxia caused by aconitine would point to a more complex action or to a concomitant depressant action upon the respiratory center as well.

On the nervous-system, aside from the action on the centers in the medulla and the sensory and motor nerves, aconitine does not seem to possess any important influence upon the central nervous system. The convulsions sometimes witnessed in cases of poisoning by this drug in all probability result from the asphyxiatic phenomena.

The question as to whether or not aconitine exerts any influence over the secretions, through any stimulation or inhibition of the nerve-trunks of the secretory nerves supplying the secretory glands or of the terminal fibers in the glands, is open to debate. The excessive flow of mucus and saliva following the inhalation of the powdered alkaloid into the nose no doubt is caused by the stimulation of the terminal fibers of the sensory nerves in the mucous membrane of the nose (the nictitating membrane) and is purely a reflex phenomenon. The excessive perspiration seen in toxic cases is the result of collapse.

The evidence regarding the action of aconitine upon the muscular structure is thoroughly unsatisfactory and contradictory. Wieland, Bucheim, and Eisenmenger affirm emphatically that the muscle curve is greatly influenced by aconitine, while with equal emphasis and certainty Murray, Boehm, and Waitman assert that aconitine does not increase the height of the muscle curve; as is shown by the myographic tracings.

Cash and Dunstan demonstrated that aconitine does not increase the irritability of muscles nor the capacity for work; the length of time necessary to induce fatigue in a muscle not being shortened when the muscle was impregnated with aconitine.

Aconitine Acts Through the Vagus

Considered from a physiological standpoint, the dominant action of aconitine upon the circulation is through the medium of the vagus. In therapeutic doses, it slows the pulse, lowers blood pressure, and causes a decrease in the heart's output per unit of time. This action, resulting from stimulation of the inhibitory medullary centers, can be prevented by section of the vagus (rabbit) or by the application of atropine.

In toxic doses, there is an acceleration of the cardiac action, extreme auriculoventricular arhythmia, and eventually delirium cordis, as the effects are observed even after section of the vagi, and, also, in isolated hearts there is presumptive evidence sufficient to warrant a hypothesis that the alkaloid must exert an action upon the heart-muscle itself.

Under aconitine, there is a marked fall in body-temperature, the regulating action of the drug upon the vasomotor mechanism making for a more equable distribution of blood in the circulatory system, an increase in heat radiation, the reductions of zones of hyperemia, by equalizing circulation, by regulating respiration and thereby bringing to a more normal condition the tidal air, and also perhaps by an action on the thermogenic centers in the cord.

While aconitine exerts a marked action upon the entire nervous system and quiets excited muscular action due to nervous excitement, it has an especial selective action upon the fifth nerve and its branches.

Toxicology of Aconitine

The primary toxic manifestation of aconitine is the characteristic tingling which it produces, first in the tip of the tongue and in the lips, later in the pillars of the fauces, in the fingers and toes, and finally in the entire body. Accompanying this is excessive salivation, nausea, vomiting, and purging. The pulse becomes rapid, weak, and irregular. The breathing is slow and labored, the skin feels cold and clammy. In most cases, the mind remains clear until the end, death resulting from carbon-monoxide narcosis, brought about by a paralysis of the respiratory center.

The treatment of aconitine poisoning consists in maintaining the body temperature, and keeping the patient in a recumbent position in order to avoid sudden heart failure through extra work being thrown upon

the markedly depressed organ or by gravitation of blood to the excessively dilated blood-vessels in the splanchnic area, and a resultant cerebral anemia. Sustain the heart with digitalin, cactus, adonidin or strophanthin. Digitalin, while physiologically indicated, acts too slowly to admit of its being used in cases where immediate action is required; hence, the preference should be given to the more powerful and quick-acting adonidin. Atropine is exceedingly useful in conjunction with other remedies, and in extreme cases sparteine and caffeine are useful.

Empty the stomach by giving a hypodermic injection of apomorphine, washing the viscus out repeatedly, to prevent reabsorption of the alkaloid; give tannic acid in solution freely, this combining with the aconitine as an insoluble tannate, and thus prevents reabsorption. As an extreme measure, Sylvester's method of artificial respiration may be resorted to.

Therapeutics of Aconitine

Aconitine is the indicated remedy in the early stages of the acute synochial and rheumatic fevers. This is especially true if these conditions arise as a result of sudden atmospheric changes; a sudden transition from warm to cold weather or during windy weather. The onset is sudden, the pulse is small, quick and hard, temperature is elevated, chilliness is felt up and down the spine, there is sudden suppression of the secretions, the skin feels hot and dry.

Aconitine is also called for in those cases in which the pulse is full, bounding, and sharp; in the initial stages of the acute inflammatory conditions (of any organ), and at the onset of any of the protracted fevers, especially those of the exanthematous kind.

While aconitine is essentially the indicated remedy in sthenic fevers, yet it must not be overlooked in conditions presenting the opposite condition—asthenia. The pulse here is small, feeble, frequent, wiry, and sometimes corded. Here, in conjunction with adonidin or digitalin, and strychnine arsenate, it is the antipyretic *par excellence*.

In the onset of the local inflammatory diseases of the mucous membranes, associated with suppression of the secretions of the membranes or a preversion of the secretions, aconitine will be found an agent of sterling worth. Such conditions are seen in laryngitis, bronchitis, tonsillitis, gastritis, colitis, enteritis, and especially in cases of cholera infantum.

It relieves vertigo when there is in the brain a sensation of swaying to and fro, and which is intensified by stooping and motion. In general, frequently there is an accompanying headache of a bursting nature.

Aconitine is especially efficacious in the fevers of children. These little patients are susceptible to very small doses of the alkaloid; and these should be given in short intervals. In spite of the powerful toxic action of aconitine, no apprehension need be felt for the safety of the little patient if the rule as promulgated by Dr. John M. Shaller of Denver is adhered to. In substance this rule is:

Shaller's Aconitine Rule

Take 1 granule of aconitine hydrobromide, of 1-800 grain, for each year of the child's age, and 1 additional granule; dissolve these in 24 teaspoonfuls of water, and give of this a teaspoonful as required.

For example: For a child 5 years of age, take 6 granules (5 plus 1), dissolve in 24 teaspoonfuls of water, and give a teaspoonful every fifteen minutes until defervescence is established, and thereafter just often enough to maintain the effect.

I have found that children *under one year* of age may be given the solution indicated for a child one year of age, i. e., 2 granules in 24 teaspoonfuls of water. No apprehension need ever be felt for the safety of the patient when aconitine is administered according to this rule.

As soon as the sedative influence of the drug manifests itself, the skin becomes moist, the temperature falls, the restlessness abates, and it is then that the interval between doses should be lengthened, until at last there no longer remain any indications justifying the continuance of the drug. In the majority of cases of simple fever, there will ensue a complete cessation of all symptoms within twelve hours, and many cases will be aborted before a diagnosis is possible.

In any and all conditions showing capillary engorgement, aconitine, by promoting tone and power of the arterial capillaries and opposing stasis of the blood, is an excellent agent. Here its influence is enhanced by atropine, the two alkaloids working in perfect harmony in all of the incipient inflammations. In any case of capillary engorgement, their combined action is most happy and leaves nothing to be desired.

It is possible that at the onset of an acute inflammatory condition the synthetic cardiac depressants will stay the fever as effectively as would aconitine; but as to the inflamma-

tory process itself they fall far short of the beneficial influence exercised by aconitine, and in the presence of inflammation they are powerless to check its progress or to prevent its results.

To the contrary, aconitine retards exudation, suppuration, adhesion, induration, and hypertrophy, properties which cannot truthfully be delegated to any other agent. Antagonize inflammation, inflammatory processes or their results it certainly does; a condition easily understood when we recall the characteristic action it exerts upon the capillary circulation. It hastens resolution and promotes the rapid absorption of inflammatory products.

In Cerebral Congestions

In the treatment of acute congestions or inflammation of brain, cord or their meninges, aconitine exercises a double influence in the early stages; i. e., it equalizes circulation and quiets the excitation of the nervous system: and, while the specific symptomatology of gelseminine is more clearly marked, and it should *per se* be the remedy of choice, yet, far better and quicker results will be obtained if gelseminine be combined with aconitine during the stage of excitation; relaxation in spinal meningitis would *a priori* contraindicate both remedies.

Possessing, as it does, a selective action on the fifth nerve, it is especially indicated in the neuralgias of this nerve or its ramifications.

The sedating and regulating action of aconitine on the respiratory center makes it of high importance in the treatment of the pneumonias, where the embarrassed respiration offers one of the cardinal indications for its use. Here also its power to relieve capillary congestion is to be desired, and in typical cases, during the initial days, the symptomatology of aconitine is so marked as to preclude any remote possibility of its nonexhibition.

Given a case of any of the pneumonias at the onset, and the combination of aconitine and veratrine (not overlooking such valuable adjuncts as bryonin, calcium sulphide, and calx iodata), and the pain in respiration, capillary stasis, and temperature are quickly brought under control.

It allays the irritation of bronchitis, promotes and restores secretions (by equalizing circulation) and, by exerting its paralyzing action on the peripheral nerve filaments, quickly soothes the irritable and inflamed condition of the mucous membranes.

At the onset of pleurisy, its indications are patent, and, if given in these cases in combination with bryonin and asclepedin, its influence is enhanced, the chilliness, lacinating pain on inspiration, cough, and dry skin, all disappear as if by magic and the patient becomes restful and easy. Here, as in the treatment of pneumonia, it should be discontinued as soon as defervescence is established, and late in the disease a trio of digitalin, strychnine, and bryonin, with asclepedin and calx iodata, is more effective.

In the treatment of mucous and serous inflammations, it is of great benefit; a matter strongly evidenced in such conditions as acute enteritis or peritonitis; whether local or diffused, idiopathic, traumatic or septic, aconitine, is an absolutely indicated remedy, and should be continued during the sthenic stage; also in gastritis, appendicitis, and hepatitis; and in acute nephritis, cystitis (in combination with arbutin) and urethritis (with anemonin), specific or nonspecific.

The exhibition of aconitine in the onset of acute rheumatic attacks should be a matter of routine with the physician. It produces prompt defervescence, mitigates the pain and swelling of the parts, and prevents the occurrence of organic heart lesions or diseases so frequently met with as sequals of the acute rheumatic conditions. Here, as in other cited conditions, its value is enhanced by combination with such indicated remedies as macrotoid, boldine, bryonin, rhus toxicodendron or collinsonoid.

In acute gastritis, gastric fever, and acute enteritis, the conditions call for the exhibition of aconitine, and it is a valuable agent in the treatment of these conditions. Here, as in the diseases of the throat, its influence is due —to a lesser extent, however—to its local as well as general influence. In the inflammatory stage of dysentery, and in cholera infantum, minimum doses of emetine, copper arsenite, and aconitine exercise a curative and specific action after the causes are removed and intestinal antisepsis is secured.

In the treatment of acute mastitis, aconitine finds a place of note. Seen early and handled with aconitine and phytolacca, a few doses will cause an abatement of the symptoms; which is most gratifying to patient and physician alike.

Women who suffer from a suppression of the menstrual flow, the causative factor being exposure to cold, or wet feet, or cold baths, derive prompt relief from aconitine. Its action in these cases is invariable, and is enhanced by combination with such remedies

as anemonin, bryonin, macrotys, or gelseminine.

Aconitine in the Exanthemata

In the exanthematous diseases, aconitine is invariably indicated, by reason of its action on the capillary circulation and skin. It aids in bringing out the eruption and promotes exfoliation. Excessive temperature is controlled, and in measles especially it should always be remembered by reason of its power to prevent a catarrhal pneumonia—a not too infrequent sequel. Cases of scarlet-fever and measles treated from the onset with aconitine go on to a speedy and uneventful convalescence, devoid of any of the so often accompanying nephritic, pneumonic or cardiac complications.

In the acute inflammatory diseases of the eye, aconitine is of service. The eye is extremely painful, sensitive to light, and the eyeball feels too large. In catarrhal inflammations of the eye prior to exudation, it is of service; there is excruciating pain and the patient is extremely restless. In acute attacks of granular lids and in pannus of the cornea, it is of assistance.

Following confinement, aconitine may be indicated for milk-fever. The mammary glands are hot, hard, and tense; fever is high; or there may be a suppression of the lochia, with high fever, hot, dry skin and hard, rapid pulse.

Surgical fever is promptly and effectively met with aconitine; it is especially useful in preventing chill after the passage of the urethral sound or catheter.

Erysipelas faciei is promptly controlled by aconitine; and, when the attacks are in sthenic patients, this drug, in combination with pilocarpine to full physiological effect, proves curative, while in asthenic cases it acts excellently in conjunction with tincture of ferric chloride.

Specific Indications

The specific indications for the therapeutic use of aconitine may be summarized as follows:

Pulse small, hard, and quick; dry, hot skin; rising temperature; secretions suddenly suppressed; chilliness along the spine; onset sudden; great anxiety on the part of the patient.

Why Not Hawaii?

A Vacation Suggestion

By E. S. Goodhue, M. D., LL. D., Holualoa, Hawaii

EDITORIAL NOTE.—In the June number of "Clinical Medicine" we printed a number of articles containing suggestions for "The Doctor's Vacation." Doctor Goodhue's contribution to this symposium reached us too late for that number, but we are pleased to be able to present it herewith.

TO BE sure, why not Hawaii for the doctor who is lucky enough to get away from home for a month or two?

Summer or winter, Hawaii is a good, safe, healthful, comfortable place to rest in for a month, or, for that matter, as long as a visitor can afford to stay.

From San Francisco to Honolulu, first cabin, the fare is $65; or, $110 for the round-trip. You have the choice of three lines of steamers; viz.:

The Oceanic Steamship Company.

The Matson Navigation Company.

The Pacific Mail Steamship Company, and all reliable and steady, with offices in San Francisco. Any doctor interested may call on our Mr. Taylor, at the Hawaiian Promotion Committee offices, on O'Farrell Street, and learn anything he wants to know about Hawaii. Also, my name may be mentioned, if it is thought that will help.

If I should state a preference (and I have been on nearly all, if not all, the steamers of all three lines), it would be for the "Manoa," "Matsonia" or "Honolulan," of the Matson Line.

The cabins on the "Honolulan" are commodious, while the table and service on all the Matson steamers are unusually good. Of course, a little tipping is necessary—say, $5 for the one-way trip.

The voyage is made in about seven days, with rather cool weather for some seventy-two hours; after that, "Lowell's June" till Honolulu is sighted.

Storms do not often occur between San Francisco and Honolulu, and, when they do, are not violent.

No matter what season of the year it be, our voyager may need heavy clothing in San Francisco and for three days after leaving land.

Thereafter, ordinary summer-clothing—white flannel or linen duck. The usual summer underwear, tan or white buckskin shoes, soft felt hat or Panama are the thing. No stiff hats or gloves are needed here.

If the doctor has friends in Honolulu and expects to participate in social functions, he ought to bring a Tuxedo and evening suit, besides his Panama. Or, his linen duck will be acceptable and quite in order, instead of the Tuxedo or more formal evening suit.

The cost of living in Honolulu is not necessarily high. At the Young Hotel (which is the best low-rates on European plan), from $1.50 to $5.00 a day are the charges. There is a good café in this hotel, where meals can be had at reasonable rates. The rates at the boarding-houses run from $10 a week and up. Rooms and restaurants are about as elsewhere in quality and prices, though the latter are not numerous or particularly good.

Travel between the various islands is by boat, as walking is bad (!); and those who have never been seasick may chance to experience that sensation; but most of the trips are made in one night, so the misery is not prolonged.

While many overland excursions may be comfortably made in the automobile on Oahu (Honolulu's island) and many interesting sights taken in, I should advise visitors to choose the Volcano trip and see Kilauea, the active crater. For the latter, take the Inter-Island Steam & Navigation steamer "Kilauea" and go direct to Hilo; or, come by S. S. "Mauna Loa" to ancient Kailua. The latter trip will enable the tourist to run through the famous Kona coffee district, and also see Kealakekua Bay, where Captain Cook was killed in 1779. A monument stands at this spot, and it bears the following inscription:

IN MEMORY
OF THE GREAT CIRCUMNAVIGATOR
CAPT. JAMES COOK, R. N.
Who Discovered these Islands
on the 18th day of January, A. D. 1778,
and who fell near this spot
on the 14th day of February, A. D. 1779.

This monument was erected
by some of
his fellow countrymen.

Kona is noted for its climate, which, by many travelers, is said to be the most perfect in the world.

It costs about $12 each way to and from Hilo, and $10 between Honolulu and Kailua. From Kailua to Hilo the fare will be a little more by boat, and a great deal more if an automobile is taken and the trip made overland. Hotel rates in Hilo and at the Volcano House are $5 a day. This trip can be made in ten days. The Promotion Committee is selling round-trip tickets, including all expenses, for $40.

In all essential respects, Hawaii may be seen on Oahu—its climatic aspects both leeward and windward, its mountains, streams, wooded valleys; its flora, too.

The trees and shrubs of Hawaii are worth coming far to see. These, with the glorious vistas of sea and sky, the soft, balmy air and caressing breezes, have given Hawaii a reputation for restful languor that is not undeserved.

Here, Charles Warren Stoddard "loafed and enjoyed his soul," writing beautiful things about Hawaii, which I have not the space to quote; here, too, Robert Louis Stevenson returned again and again, ever reluctant to leave; here, Mark Twain came to stay for months, and long afterward wrote of his impressions:

"No alien land in all the world has any deep, strong charm for me but that one. No other land could so longingly and beseechingly haunt me sleeping and waking, through more than half a lifetime, as that one has done. Other things leave me, but that abides; other things change, but it remains the same. For me, its balmy airs are always blowing, its summer seas flashing in the sun; the pulsing of the surf-beat is in my ear, I can see its garlanded crags, its leaping cascades, its plumy palms drowsing by the shore; its remote summits floating like islands above the cloud-wrack; I can feel the spirit of its woodland solitudes; I can hear the splash of its brooks; in my nostrils still lives the breath of flowers that perished twenty years ago."

Honolulu itself is a beautiful city, and furnishes all the modern comforts the traveler may wish. It is sometimes a little warm, but not often uncomfortably so to one who in dress and movements adapts himself to the climate.

On the whole, I know of no more delightful vacation trip than that to Hawaii from the mainland, if taken by a man who is temperamentally fitted to travel anywhere else.

And to the adventurer to our shores, I can promise a reminiscent after-glow of remembrance that will be a joy forever in his memories of experiences.

Refraction for the General Practitioner

The Ophthalmoscope

By Thomas G. Atkinson, M. D., L. R. C. P. (Lond.), Chicago
Author of "Essentials of Refraction"

EDITORIAL NOTE.—Are you following this series of papers upon refraction? If not, then you are missing a good thing. Refraction work is easy to learn, is pleasant, profitable, and opens up a splendid field for good men. Look up the back numbers in Doctor Atkinson's serial. Buy a copy of his book. Write him for details, if you do not understand him fully.

I HAVE already said that the information to be gained by means of the ophthalmoscope in respect of refraction is exceedingly meagre and difficult to obtain. However, with a view to making our treatment of the subject complete, I will explain the use of this instrument in estimating errors of refraction.

The principle of the ophthalmoscope is essentially the same as that of the retinoscope; that is to say, it is designed to intercept rays of light emerging from the patient's eye and to focus them for the observation of the operator. Its construction is also similar, consisting of a mirror pierced with a central sight-hole, behind which the observer's eye is placed for the purpose of receiving these emerging rays. The working-method, however, is different.

In using the retinoscope, our aim was, to bring the emerging rays to a focus at the sight-hole, without the help of the observer's own refraction, using lenses for this purpose. With the ophtha moscope, on the other hand, the aim is, to make the emerging rays parallel when they reach the sight-hole and then to focus them on the observer's retina by means of his own refraction; which latter must, of course, be normal and his accommodation at rest, in order to accomplish this Lenses are employed to bring the emerging rays to parallelism, but in the case of the ophthalmoscope, these lenses are attached to the instrument, behind the mirror, in a cylinder similar to the cylinder of a revolver, and are wheeled into place by the operator's finger, as needed. There is in this cylinder a series both of plus and of minus lenses.

There are two methods of using the ophthalmoscope—the direct and the indirect. The direct method gives us, as its name implies, a direct, upright image of the fundus, very large and detailed, but not complete; that is to say, we can see only a portion of the retina at a time, and must sweep it around, like a telescope, in order to examine the whole eye-ground. The indirect method gives us an inverted image, rather small and with less detail, but complete; we can see the entire fundus at once.

For the practice of the direct method, a strong bull's-eye light should be placed just behind the patient's head and to the side of the eye to be examined, about on a level with the patient's ear. The operator seats himself, *vis-a-vis*, close to the patient, on the side to be examined, and applies to the sight-hole of the instrument his own eye corresponding to the patient's eye under scrutiny; that is to say, his right eye for examining the patient's right eye, and *vice versa*.

Since it is imperative that the operator's refraction be normal and his accommodation at rest, if he have any error of refraction he must wear his proper correction or else wheel his proper correcting-lens behind the sight-hole, and must relax his accommodation while he makes the examination. Having got the disc of light on the patient's pupil and obtained the red fundus glare (as in retinoscopy), he now places his eye and mirror quite close to the patient's eye, still keeping the illumination on the pupil.

Now, since the patient's accommodation is at rest, if his refraction be normal, the rays emerging from his eye will be parallel; and, since the operator's refraction is normal and his accommodation relaxed, his eye is in a condition exactly to focus these parallel rays upon his own retina. Therefore, if the patient's refraction be normal, he should obtain a clear and detailed view of the patient's fundus, seeing all the arteries, veins, and pigmentation, the nerve-head, and every other landmark of the retina.

If, however, the patient's refraction be not normal, then, of course, the emerging rays will not be parallel and will not focus on the retina of the observer so that he will not get a view of these eye-ground details. In that case, it will be necessary for him to wheel behind the sight-hole the lens, plus or minus as the case may be, which will render the emerging rays parallel before they enter his own eye;

and that lens will be the nature and measure of the patient's error. As to whether it be a plus or minus that is needed, that can be ascertained only by trying, the rule being to try plus first. If this plus-lens improves the view, then find the desired strength of plus-lens; if a plus makes the view worse, try minuses in the same way. If it requires plus, the patient is, of course, hyperopic; if minus. he is myopic.

If the patient be astigmatic, the view obtained of the details of the fundus will differ in the two chief meridians. If, for instance, the two chief meridians be vertical and horizontal, the observer will see the up and down vessels clearly with one correction, and the cross vessels clearly with another. In that case, these two meridianal corrections are ascertained, and the final correction for the eye worked out as already explained.

It will be readily seen that in this procedure mathematical accuracy is almost impossible. The chances for error are too great, the most mischievous source of error being the failure of the observer properly to relax his accommodation. Especially is this so in hyperopic errors of the patient—the commonest of all errors. It is so easy—so irresistible, almost—for the observer to accommodate a little and thus get a focus of the divergent emerging rays that one must always suspect the findings, except where the operator is a man of long and repeated experience in the art of ophthalmoscopy. In myopia, of course, there is no such irresistible incentive to accommodate, but the slightest accommodation on the part of the observer would vitiate the findings here also.

This is even more difficult of accomplishment. Perhaps I better should say, more difficult of interpretation, for the actual technic is, I think, easier. For this procedure, the light should be placed above the patient's head, and the operator can use his own right eye for both observations. Here, he seats himself about a meter away, in front of the patient—the precise distance is not important. Having found the red fundus glare, he holds with his left hand a plus 9 or 10 lens (called the "objective") in front of the patient's eye and adjusts the distance between his sight-hole and this objective so as to give him a clear magnified view of the patient's fundus. As stated, in this procedure he will get a small view, about the size of a dime or a nickel, of the entire red fundus, with the circular pale disc (nerve-head) in the center, from which all the vessels branch away.

Since this is a virtual image, which the operator is viewing objectively, just as though it were suspended between himself and the patient, it is plain that the size of the image (or at least its apparent size) depends upon the parallelism, or otherwise, of the rays that make it. If they are parallel (i. e., if the patient's eye be normal in refraction), no matter where the objective lens be held between the patient's eye and the observer's, the apparent size of the image will be the same. If they are divergent (i. e., if the patient be hyperopic), then the farther away from the patient's eye the objective is held, the more divergent the rays, and the smaller the apparent size of the image. If they are convergent (i. e., if the patient be myopic), then the farther away from the patient's eye the objective lens be held, the more convergent the rays and the larger the apparent size of the image.

In the indirect method, therefore, we test the nature of the patient's refraction by slowly withdrawing the objective lens farther and farther away from the eye, and watching through our sight-hole the apparent size of the disc. If it remain the same, we conclude that the patient is emmetropic; if it diminish, he is hyperopic; if it increase, he is myopic. If it increase in one direction and stand still or diminish in another, he is astigmatic. The indirect method is not available for estimating the degree of error.

The real value of the ophthalmoscope is not in the estimation and correction of errors of refraction, but in the detection of diseased conditions of the retina that so often are associated with poor vision. Many patients consult the physician because of defects of vision, thinking that they need glasses, when, as a matter of fact, the defective sight is due to diseased conditions of the eye, such as retinitis, retinal anemia, glaucoma, chorioiditis, and what not.

These conditions are all diagnosed by the ophthalmoscope. Hence, while it may not be a very useful agent of refraction, being vastly outdone in that respect by the retinoscope, nevertheless, it is an almost indispensable instrument in the hand of the refractionist, too, since it enables him to separate cases of organic visual defect from those of refractional error. And this should be done *the first thing*. That is to say, whenever a patient complains of poor vision, the ophthalmoscope should be called in aid before any other procedure is employed; for by its means we can at once determine the soundness of the eye and get an idea of the nature and rough extent of any error of refraction.

The Medical Economic Situation

A Study of Plans for Professional Defense

By Daniel S. Hager, M. D., Chicago, Illinois

PERHAPS there is no subject more interesting and at the same time so important to the general practitioner as that of the right to earn a living for himself and his family; and day by day it is becoming ever more difficult to exercise this right.

The general cost of medical education has greatly increased; the necessary time of preparation has been lengthened; and the importance of postgraduate work is becoming more and more apparent. The cost of living has more than doubled within recent times, while the professional fees for medical services have either remained stationary or even been lowered.

The physician finds that his teaching and work and influence have very materially lessened the prevalence of sickness, thus himself limiting the field of his own efforts. At the same time he has helped to build up institutions and systems which give certain men prestige over their fellow practitioners, enabling them thereby to secure large fees for themselves and besides practically to rob the general practitioner of that which he has. And what is perhaps the most important of all, these institutions and systems have been grossly abused by the public, the people having taken advantage of them at the expense of the medical man, and have not given anything like a *quid pro quo;* for which they doubtless are much less to blame than is the profession itself for allowing such conditions to spring up and to persist.

The economic problem of the profession, therefore, centers chiefly around medical-charity abuse and contract practice. Most medical-charity and contract practice unquestionably are here to stay. In the larger cities, clinical material is constantly needed, while the attitude of the industrial world toward the question of health and efficiency ensures the permanence and growth of contract practice. In fact, if my interpretation of the outlook is correct, before many years have passed a national industrial insurance bill will be forthcoming in this country, similar to the one now in force in England.

We Need to Apply the Golden Rule

In my opinion, all of these problems are to be solved by the frank and genuine application of the golden rule among the profession itself, and its extension from the profession to the public. The doctor who gains prestige must give something in return. The people who are seeking health must be shown that they will have to pay for this service—by submitting themselves as educative material to the undergraduates.

The practitioner, on the other hand, must learn to work with his own hands and to manage his cases himself; and sooner or later he will be just as proficient as the "big guns" who now monopolize the hospitals and dispensaries. The large number of privately controlled and privately financed postgraduate schools should gradually be brought under one head and be financed by the profession or even by the public, while the instruction given should be not in the hands of only a single individual, but various physicians from the special branches of medicine represented should be on the staff.

Simple as this scheme of solution may sound, however, the profession needs to realize that this change will not bring itself about automatically.

It is absolutely necessary that medical men should undertake a systematic and organized effort for their own enlightenment. The economic situation is at this moment by far the most pressing and serious of all the medical man's problems and it behooves the profession to lose no time in organizing effectively and getting seriously to work at an active solution of this threatening problem.

Plans for Economic Defense

Two years ago, while I was a member of the Medical Charity Abuse Committee of one of the largest medical societies in America, I began an extensive correspondence with the various societies throughout the country, to find out what was being done in this regard, and I now wish to give a summary of this correspondence and then outline some logical measure for correcting the evils now confronting the physician both in the city and in rural districts. In fact, the effort at solution is already well started; for in Chicago and New York, the cities most seriously affected, there already are two organizations under way—economic and social clubs or

federations; New York having the largest number of them, with Chicago a close second.

It should be understood that nothing can be expected from the old-line organizations, as their rules restrict the method of doing business, and their methods of organization do not permit much attention being given to economics. We frequently hear it deplored, both inside and outside of these old-line organizations, that the professional ideals are being forced to give way to commercializing processes. The real trouble is that no systematic or intelligent attention is being given to the economic side of medical practice. A national movement necessarily must be started in this direction before we may expect any improvement; and this opinion is being amply verified by the large number of economic clubs now being organized along this line, which naturally must increase, and ultimately be united into, a national body.

The Medical Centers Interested

While New York is the center in which conditions are worse, it is here that most has been done toward a solution of the problem. They have not solved it yet, but are putting forth energetic efforts that in the near future are sure to bring about great results both to the profession and to humanity at large. There are now in existence some half a dozen economic clubs and one clinical club, which are so many progressive forces, compelling recognition by old-line medical organizations. These clubs demand the use of clinical material in a manner calculated to gain the confidence of the public, as well as to secure ethical justice for the rank and file of the profession.

New York began the investigation of medical-charity abuse in 1878; but, while the work has made rapid progress, it has been done mainly through each individual unit in the profession asserting itself. My personal opinion is that a central clinical home built up and controlled by the medical profession will furnish the ultimate solution of the charity-abuse question in New York City.

It is now some six years ago that the Chicago society began to take notice of this matter, but, unfortunately, not much has been accomplished, owing to the fact that the Chicago Medical Society has been in the hands of two political factions for a number of years. A brighter star, however, is now appearing, for already one economic club has been organized, and its members are enthusiastic and energetic; and other similar clubs are in contemplation. This will mean for Chicago the same good that has been accomplished in New York.

The Philadelphia society has had this matter up for some time and has formulated a set of questions for the dispensary-men to answer; and this has brought out the fact that the heads of dispensaries resented the attempt by men on the staff to bring about any change in conditions. Hence, the matter had to be dropped in that particular direction. The reformers then attempted to place all dispensaries and hospitals under state board of charity control; but this movement failed at the last session of the legislature, because of the press of other bills before that body and also because of the apathetic attitude of the profession at large. I am told that Philadelphia expects to go before the legislature again next year.

Other cities canvassed were Boston, Baltimore, Richmond (Va.), Atlanta, New Orleans, St. Louis, El Paso (Tex.), Los Angeles, San Francisco, Seattle, St. Paul, Denver, Omaha, Kansas City, Cincinnati, Milwaukee, Detroit, Buffalo, and Cleveland. The reports from the cities named indicate that in most of them the charity abuse and contract question is being agitated, but that nothing very definite has as yet been done, either in the way of organization or of actual results.

The Commercializing of the Profession

The most casual observation will show that the tendency of the time in medicine or in the industrial world is toward centralization and monopoly. There is plenty of proof to substantiate this statement.

The introduction, recently, of the surgical bill into the Illinois legislature, under which a general practitioner would scarcely even dare to lance a boil; the recent organization of a body of men calling itself the American College of Surgery—a bold attempt to build up an aristocracy in the surgical ranks of our profession; the inevitable oncoming of industrial insurance, which will enable the "big guns" still further to attempt domination and ultimate elimination of the rank and file—all of these things, besides others which I have not space to mention, point the same way.

Are you quite sure, doctor, that you yourself have not contributed to these threatening conditions? Put this question frankly before yourself, and ponder.

Wake up, brother, and become an aggressive, active, fighting unit; determined to better your own conditions and, in consequence, be able to give better service to

humanity, to which our profession is now and always must be consecrated. Or, are you willing, by remaining passive, to help still further to commercialize that profession to which you are tied?

Can you forget the struggle and the split in the British Medical Association when a few medical politicians tried to sell out the mass of the profession? Do you know that the British Industrial Insurance Act compels everyone to become an active unit and to contribute liberally in order to prevent his own extinction?

Then, in the face of these things, do you not think it were better for you to organize and make ready for future action now, rather than to wait until the politicians, medical as well as lay, have set the traps for you?

(To be continued)

Eugenics: An Entirely Unscientific Consideration

By A. L. Benedict, A. M., M. D., Buffalo, New York
Editor of "The Buffalo Medical Journal"

EDITORIAL NOTE.—This paper is a continuation of one upon the same subject that appeared in the December, 1913 number of "Clinical Medicine." While it is complete in itself, the reader will find it of added interest if he will look up the first installment, and also read Professor Jordan's paper on "Sex-Sterilization," which occurred in the same issue.

IN THE beginning of the previous article, dealing with general questions of inbreeding and outbreeding, and related problems, it was intimated that the subject was not a new one by several thousand years. In regard to the influence on stirpiculture of pathologic states, and especially of venereal diseases, habit-addiction, stress of civilized life and more or less marked abnormalities of the nervous system or at least of nervous function, it must be admitted that the agitation is comparatively recent.

It is true that the general prejudice in favor of sobriety, physical health, mental and nervous equilibrium, and good moral character has been held from the most remote times. But pathology as a science is very recent, and, so, anything like definite knowledge regarding the influence of disease upon heredity must be equally recent. However, the mere fact that eugenics is being freely discussed where, according to old-fashioned standards of more or less false modesty, it should not be, and that young and old, of both sexes and all degrees of education are frankly interested in the subject, does not imply that no attention has been paid to it in the past or that anything of particular value has been just discovered.

Doubtful Value of Academic Teaching

While he was a medical student, a trifle over a quarter of a century ago, the writer and his comrades would, undoubtedly, have been shown to the door if they had introduced eugenics as a subject of polite conversation by the young women now the mothers of the young girls who at present are reading papers upon it. But it was by no means neglected either in college or in men's clubs and in associations for religious and moral advancement.

On entering practice, the writer found that his men friends applied for a clean bill of health in regard to venereal diseases, quite as a matter of course; and, as to tuberculosis, cancer and other constitutional diseases, practical regard for eugenics counteracted romantic attachment, probably as strongly as today, when the odds remain in favor of the latter in the practical outcome. Even before this, instruction in sex-hygiene was by no means neglected, and, if not so elaborate as at present, still was of a sensible, practical degree. The innocence of childhood was retained by grown people as a comforting ideal, but was ridiculed by most of the boys whom the writer knew, from the age of five or six.

From the technical standpoint, it does not appear that the cause of eugenics will be materially assisted by transferring interest in it from the individual parent, teacher, clergyman or physician to the same acting as wholesale distributors of information from the rostrum, nor by making it a matter of current literature and parlor conversation.

The enthusiasm of anemic, splanchnoptotic old maids over Mendelian dolls and diagrams of the ravages of the gonococcus is pathetic,

but somewhat futile. It undoubtedly is better that boys should receive instruction from mature men of sense than from quack literature, family medical guides read surreptitiously, and from that former authority of authorities, the boy who works in the drugstore. However, it is not impossible that the very general and frank attention to sexual matters may, like instruction in physiology, of general nature, electricity, geology, and so on, lead to experimental research in ways not at all intended.

In one sense, it is well that systematic cooperation should provide against the neglect of individual parents, teachers, family physicians to give due warning to children of the many dangers that beset them. But it is not impossible that the publicity which such systematic instruction involves will act suggestively to keep the matter of sex prominently in the minds of immature children during the period of puberty and adolescence when the interaction of physical reflexes and psychic stimuli is least desirable, and that the degree of suggestion will be increased, in comparison with the former plan of personal, brief, and rather reluctant allusion to what were considered indelicate subjects.

Theory Versus Practice

Formerly, it was held, on somewhat theoretic grounds, that all children were, or at least ought to be, innocent. The boys pretty thoroughly understood that this was a theory so far as they were concerned, but they held this theory as still applying to girls, though with more or less skepticism.

It is conceivable that the common knowledge by children of one sex, that the other sex is instructed and interested in sexual matters, may lead to a sharing of this interest between the two; at first, possibly, quite innocently, but with the same potential danger as occurs when adults, who are supposed to have more judgment and self-control and less curiosity than children, commence an impersonal and quite Platonic discussion of such matters.

These presentations of possible results are not intended to express a definite opinion. Nothing but actual experience, after the lapse of several years, can determine whether popular and free discussion of sexual matters, without regard to sex or age, will tend toward morality and a better race or toward their opposites. It might seem necessary to qualify the allusion to age, but, since one of the most popular illustrations of the instructionists is that of a child apparently just learning to talk eagerly interrogating its mother, even this criticism scarcely holds.

There is one phase of the problem, however, which does not seem to have been observed by the instructionists, and which would be very seriously considered in a matter of therapeutics, politics or applied invention. It is this. If general instruction of the young in sexual matters should turn out unfavorably, the effect of this will be permanent. The knowledge conveyed can not be stopped, but will be imparted from one generation of children to another; in more or less garbled form, to be sure, but all the more harmful on that account.

Parental Judgment Is Nullified

There is another, almost equally serious, problem to be considered. While it is the duty of society, either by public authority or by private philanthropic organization, to supplement or displace the influence of a careless, negligent or vicious parent, it is only in the clearest cases of bad judgment that society has the right to thwart the otherwise intelligent, moral, and careful parent in carrying out such a scheme of religious and social influence as he may deem best for his child.

Now, there are parents who are intelligent, moral, and careful of their children's interests in every respect, save that they hold, in regard to the matter of innocence, with the majority of parents of the last and the preceding generations, instead of with the majority of parents and quasi parents of the modern view. The present plan of sexual instruction removes from these parents the possibility of carrying out their theories, except by a degree of supervision amounting almost to incarceration, which is impossible for many and harmful from almost every other standpoint for all.

For these two reasons, the writer, although by no means opposed in theory to the idea of instructing children along lines of sex-hygiene and morality, feels that the matter should be approached with great hesitation.

No Racial Deterioration Through Free Breeding

To turn more directly to the influence of pathologic conditions upon stirpiculture, it is well to consider general influences first.

Investigation justifies a rather more optimistic view than is ordinarily held. With some exceptions, the human race has not deteriorated in stature, strength, longevity, acuteness of the special senses, and so on, in spite of the supposedly deteriorating in-

fluence of civilization, so far as osteologic evidence can be depended upon and comparison of athletic and other records, ancient and modern, is possible.

It is true that the demands of civilization often cause myopia and astigmatism, render the building of muscle inconvenient, expensive, and unnecessary, and, in other ways directly sacrifice the individual. But, not only does civilization minimize the importance of many handicaps upon the individual, but a member of civilized society not already handicapped in some such way, placed in competition with a savage in what are usually considered natural—that is, non-artificial conditions—holds his own even without the adventitious aid drawn from his civilized experience and knowledge.

While, as man has evolved, specific infectious parasites have also evolved, so as to increase the number of diseases to which he is especially liable, in most instances, his resistance to these diseases has also increased, so that the exanthemata, and so on, comparatively low in mortality when attacking civilized man, show a remarkably increased fatality when first introduced among a savage race. History shows that Europeans were pretty thoroughly syphilized during the middle ages, and, while the history of gonorrhea is more contradictory, it is more reasonable to suppose that it, too, is an old disease of the Caucasian race. (Note the account of Abraham, for example, in Genesis, and the somewhat vague medical writings of the Greeks and Romans.)

No one can deny the terrible consequences of these two diseases, but, so far as stirpiculture is concerned, the least terrible is their well-demonstrated influence in preventing conception, viable birth or in early killing such offspring as are viable.

It is possible in almost every case of cancer in which the patient has a large, known family to find other cases, and cancer certainly is increasing along with, perhaps in excess of, the recently achieved prolongation of the average of life. But it is doubtful whether cancer actually produces a hereditary tendency to cancer, while it is almost certain that it is never directly transmitted to the offspring. Usually coming late in life, it does not tend to reduce fecundity, except in the sense that a prolific mother seems to be increasingly more prone to develop cancer of the uterus, and thus to have her further potential fecundity stopped.

Tuberculosis presents many problems difficult of solution, and no one will deny the unwisdom of marrying a tuberculous person. Still, without attempting their discussion, it may be stated broadly that it has shown no such hereditary tendency as to limit itself to special families and to exterminate itself by exterminating the susceptible material; nor, on the other hand, has it disseminated itself universally, unless in a very mild, self-immunizing form. At the worst, tuberculosis has not exceeded the ten-percent limit. According to a conservative study of recent statistics, it seems to have diminished at least at the same ratio as the general death rate, while, according to optimists, its mortality has decreased more rapidly than the general rate.

The evils of alcohol need no further embellishment. For all that, it must be conceded that whatever advance any race has made after leaving the stage of savagery and before sufficient ingenuity had been developed to manufacture an alcoholic drink, and up to about one hundred years ago, has been in spite of a nearly universal addiction to alcohol. Practically every important historic event has been brought about by men who used alcohol freely, often excessively, according to present standards.

One detail, possibly of minor importance—but so much emphasized in recent attempts to better the condition of the race that its mention needs no apology—is the literal interpretation of part of the second commandment, which refers to visiting the sins of the father . . . . unto the third and fourth generation.

Dr. J. Henry Dowd has recently discussed this subject in *The Buffalo Medical Journal*, and made a very good argument against the transfer of a definite pathologic process even beyond the second generation. However, the transmission of racial markings, of general weakness and of bad habits, the last mainly by environment and example, does occur to the fourth generation, and scarcely beyond it.

At the risk of displaying an optimism that undoubtedly will arouse unfavorable criticism, the writer ventures to emphasize the self-purifying tendency of the hereditary current. Taints of all kind rapidly subside, become innocuous by dilution or, so to speak, evaporate by the marked tendency to sterility and nonviability, or even to nonmarriagibility expressed in such ways as impotence, frigidity, and lack of attractiveness.

Before condemning this statement too strongly, the critic should ask whether the race, on the whole, has improved or not. If,

as the writer believes, it has improved, undesirable types tending to extinction, it should be remembered that this process has occurred in spite of pretty general leprous infection of the ancient civilizations, of prevalence of cholera for centuries, of almost universal syphilization of European subraces, of a 10-percent death rate from tuberculosis maintained for generations in many races, of a male involvement with gonorrhea estimated by the most conservative above 50 percent for several generations, and dating back many centuries; not to mention occasional and constant but relatively minor infections of a considerable variety.

And all these unfavorable pathologic factors have coexisted with a general ignorance of their exact nature and of definite means to combat them, until within the memory of men still of middle life, barring a few crude, empiric methods of prophylaxis and treatment of greater or less antiquity.

The general contention, that the race has improved, warrants the inclusion of a few detailed statements. For example, primitive races, in spite of superficial claims to the contrary, do not show greater stature, perfect preservation of teeth, greater acuity of the special senses, except as habits of life directly tend to the development of defects in civilization, greater resistance to disease—but rather less—nor, with the qualification just made, any other marked superiority to supposedly decadent modern types. An inquiry will show this to be the case.

Hence, we must regard eugenics not as a study necessary to prevent the extinction or deterioration of the race, but as one to expedite progress, to avoid the futile, though conservative, process of elimination of diseased and weak offspring, to prevent the needless sacrifice of individuals, and to relieve society of the enormous burden of caring for defectives.

Genitourinary Disease and the General Practitioner

By D. E. Piconi, M. D., Brooklyn, New York

PERHAPS there is no other branch of medicine in which the general practitioner has more needlessly and ingloriously acknowledged himself beaten and incompetent by allowing the specialist to step in than in the genitourinary field.

So unconcerned and careless, indeed, has the family doctor been in this respect that nowadays the ordinary layman in our cities and towns turns in at the specialist's office for even the treatment of an ordinary attack of gonorrhea. Surely, this implies an utter lack of confidence in the family doctor in these matters—the same family doctor who, by even the same individual, is allowed to tide him over a crisis, with full confidence and without the demand for a specialist's expert and costly advice.

The Cause Lies in the General Practitioner Himself

Now, no one is to blame for this lack of confidence on the layman's part, in affairs genitourinary, but the practitioner himself. For, the truth of the matter is that he neglected this important specialty perhaps even while at college, where little account, at best, was taken of it; and later, when the doctor began in his practice, he let the matter go and took the easiest way out of it. So, it began to be murmured around that "Dr. So-and-So may be all right in some things, but, as for treating private diseases, no sir-ee." And that was the end of the doctor's genitourinary practice.

On the other hand, the doctor may have been taught the thing and studied it well enough at school, but he has been in harness for about ten years, and, having been too busy, or too lazy to keep abreast of the times, has not bothered to take note of the vast strides which this particular branch of medicine, especially, has taken in the last ten years. Therefore he has let Dr. O. K. Pusher, who employs modern exact methods in diagnosis and treatment, get ahead of him; with the result that Pusher has slowly acquired a reputation for this sort of thing, and is going up, up, up, until one fine day he hangs out a shingle bearing in embossed gilt letters the legend, Specialist in Genitourinary Diseases. Some time later, having become quite important in the community, he decides that he can dispense with qualifying appellations and, so, boldly erases all distinctive titles, even the handle M. D., and

his office-hours as well, so that his sign now simply reads, Doctor Pusher. And this metamorphosis tells you the whole story.

The Income From Treating Genitourinary Diseases Is Worth While

And who has been the sufferer all this time? Whose pocket is less replete? Why, the family doctor's, of course—those patients were his originally, and should be his now. The specialist's income has been derived and taken from that of the other man, the regular practitioner—so, there you are. And a good little income it has been, too. For the care and diligence with which the ordinary man exercise in sex affairs and the total disregard of money when it comes to the successful treatment thereof is proverbial. The votary at the shrine of Aphrodite, when "caught," is willing to spend his last cent to set matters straight in this respect, and is very sensitive about it—as may be seen in the fabulous fees exacted for expert treatment and the wealth acquired by quacks engaged in this line.

So, it may readily be seen that the general practitioner pays heavily for his lack of proper attention to this particular branch of medicine, and that his loss because of this dereliction is considerable.

Brushing-up Needed

All this ought to teach your ordinary practitioner that it is really worth while to "brush up" on the modern methods of exact diagnosis and treatment of this class of diseases and thereby increase his income very materially.

Let him buy a good up to date edition of some practical treatise (or, several of them) on the subject, of which there are many excellent ones on the market.

Let him become proficient in the technic and indications for the use of the various more common instruments used in diagnosis, such as Valentine's irrigator, Thompson's searchers, Nitze's observation cystoscope, Klotz's endoscope, also catheters and bougies.

Then let him go slowly, carefully, intelligently through each case and not be afraid to engage the services of a good, reliable laboratory.

Some Remarks on the Examination of the Urine

Through urinary-examination findings we can invariably spot a kidney lesion or an acute or chronic suppurative process. In this respect, the finding of pus or of epithelial cells is very important. If these are found, one should send another specimen to the laboratory, with instructions to pay particular attention to these two abnormal constituents and to the reaction of the urine. The report on this must be studied carefully.

Pus in the urine, of course, always indicates a suppurative condition somewhere along the genitourinary tract—renal abscess, pyelitis, cystitis, stone, urethritis or prostatic abscess. In the former two conditions, the urine usually is acid in reaction; whereas, in the other conditions mentioned, it usually is alkaline. Pus from the kidney is apt to vary greatly in amounts or is discharged intermittently; while that coming from other places along the tract (bladder) is fairly constant in amount and is discharged continuously.

As a routine measure, in all pus-urine cases, with obscure and conflicting symptoms, as well as in those which do not respond to treatment, one cannot too urgently advise to have the guinea-pig inoculation test made in order to determine whether or not the patient has a tuberculous condition of the kidneys.

A Word on Phimosis and Circumcision

It were well for every practitioner to be thoroughly versed in the technic of the operation for circumcision—which is easily and safely done. He should do this, not only to cure such a disease as phimosis or to cause a disappearance of irritative nervous maladies having a sexual origin, but also in order that we may suggest the operation to the various venereal patients who present themselves.

Wolbarth has already pointed out that circumcision is decidedly a prophylactic measure against syphilitic infections, chancroid, venereal warts, herpes, epithelioma, and so on; that it works a diminished tendency to masturbation and nocturnal pollutions, convulsions, and other results of local irritation; and that it prevents balanitis.

In view of all this, it ought to be the duty of every practitioner who is treating a venereal disease to point out the advantages to his patients and strongly recommend the "silly little operation," while, at the same time, incidentally obtaining his little fee for services rendered.

In closing, I may be allowed to state that one of the best rules to remember in treating venereal patients in general is this:

Treat your patient with consideration, with sympathy and tact. Don't ridicule; don't be sarcastic. Don't try to deceive him. Don't make your fee exorbitant. Treat your venereal case as you would a typhoid case, and watch the results.

The Management of Chronic Maladies

Methods Which Have Proven Successful

By J. M. FRENCH, M. D., Milford, Massachusetts

EDITORIAL NOTE.—This is the final paper in a series of articles which have been appearing in this journal at irregular intervals for several months, and in which the practical application of the active principles and allied remedies to specific diseases have been given special attention. Doctor French knows his subject and makes his articles of surpassing interest as well as of great practical value.

UP TO this time we have considered only the treatment of acute diseases. In these conditions the needs of the patient are urgent. The treatment must begin early, and be pushed to effect. In the words of Burggraeve: "To acute maladies we must oppose a sharp and active treatment; that is to say, the treatment must proceed as rapidly as the disease."

It must be remembered that in these cases the result to be sought for is speedy recovery, the thing most to be feared being death. This afternoon, however, we are to consider the general principles that should be followed in the management of chronic maladies, where the progress of the disease is slower, and where improvement and comparative comfort of the patient often is the best that reasonably may be anticipated, and where death is not always the worst thing to be feared.

Some chronic diseases are curable under proper management, while others are incurable under any management or any form of treatment. You may ask me, "If a disease is acknowledged to be incurable, why treat it?" The point is well taken; the answer, however, is plain.

Suppose you yourself have a well-marked valvular disease of the heart. You may be quite sure that your affection never will be cured, never can be cured; still, is that any reason why you should be abandoned by your physician and left to suffer the worst that nature can bring upon you? Certainly not! For, with proper care and such treatment as may be indicated, you can in all probability go on for twenty years or longer in comfort and good general health, scarcely knowing that you have leaky valves, save as it is revealed to you by the stethoscope of the medical examiner; while without appropriate treatment life would soon become a burden and death a welcome relief.

It is told of a noted divine that he once gave a very remarkable prescription for the attainment of long life. Listen, and take note of it, for there surely is something in it. This is how to attain long life: "Have an incurable disease—*and take care of it.*"

I do not, indeed, advise that you should follow literally this suggestion, especially the first part of it; and, yet, I think that if you will read between the lines you will see that it is one of the best prescriptions for longevity that ever was given. For you may have noticed that it is the bluff and hearty athlete, the man who seems always well and active, the *bon vivant* who enjoys his food and thinks that he can eat anything, because he has a cast-iron stomach—it is this kind of a man who has a way of dropping off suddenly in time of stress or strain or of dying quite unexpectedly at an age not past middle life.

On the other hand, the man who has found his limitations, and who found them early in life; who knows that he has disabilities and weaknesses, and where they are to be found—and who then guards his weak spots with zealous care—this is the man who lives to a respectable old age (though perhaps not to extreme old age) and who does his full share of the best work of the world. The reason is that he has learned to take care of himself. And so it is with many chronic maladies: if early recognized and properly cared for they are fully compatible with length of days, a useful life, and personal enjoyment. These things are worth remembering when we are considering the management of chronic diseases.

Another difference between acute and chronic ailments is that when a person is ill with an acute disease, if the tide is turned and recovery sets in he expects to be well in a short time, able to stop all medical treatment, forget all thought of taking care of himself, and drop back into his old habits of living. But many times the chronic patient must content himself with something less than this—must make up his mind to keep a close watch over himself all his life, and it may be take more or less medicine as long as he lives—that is, if he wants to live long or be of any use in the world or enjoy himself while he lives.

It must be remembered that there are many abnormal conditions which, while not classed as diseases but merely as "diatheses," yet,

are the cause of great discomfort and much suffering and meanwhile prepare the way for serious and even fatal diseases. For example, there is the condition—alas, all too common—of chronic constipation, which results in autointoxication, arteriosclerosis, rheumatism, neuralgia, and unnumbered other forms of suffering.

Chronic Constipation

Chronic constipation has many causes, all of which may be included under the two heads of inherited tendencies and acquired habits. It can be avoided in most instances by correct habits, provided they are formed in early childhood; and even after it has become in a measure fixed much may be done to relieve and correct it by proper diet, hygiene, and remedial measures of various kinds.

I do not know of any medicine which can be depended on to cure constipation. In fact, very few confirmed victims are ever really cured at all, although they may be greatly relieved. However, the combination that has given me more help than any other, and which comes nearer to being a cure for chronic constipation than any other combination of drugs of which I have any knowledge, is the little anticonstipation granule devised by Doctor Waugh. In this granule a number of drugs are combined with great skill for the purpose, and the finished product possesses the unusual property of producing the desired effect in gradually and constantly reduced doses, until at last, when taken in strict accord with the directions which Doctor Waugh has given, the remedy can finally be dropped entirely; and, with proper care, the constipation will not return.

That is to say, this is the way it works in favorable cases. However, in order to secure the result named, it is not enough merely to swallow a certain number of granules at a given time each day. Like the great painter's colors, the granules must be "mixed with brains." Burggraeve's directions again apply here: "To chronic maladies, we must oppose a deliberate method of treatment. That is to say, the treatment should proceed slowly, in proportion to the lengthened duration of the disease." Many cases of chronic constipation fail to be cured because of the too rapid withdrawal and too early discontinuance of the remedy.

Acidemia

Then there is the condition known as acidemia, which is closely related to the socalled uric-acid diathesis and the various manifestations of rheumatism. As among its early indications may be mentioned fermentation in the different portions of the alimentary canal, with eructation of gas, sour stomach, heartburn, and an unduly acid urine. This later is easily discovered by Harrower's method. When this acidity is found greatly to exceed the normal, it may be corrected, either by the administration of alkalis, to neutralize the acid; or by means of eliminatives designed to stimulate the glandular organs to greater activity, whereby the acid deposits may be removed from the system; or by a combination of both of the two methods, in conjunction with such a regulation of the diet and general habits as will prevent or at least lessen the liability to similar deposits in the future.

One of the best remedies for this purpose is composed of sodium bicarbonate, sodium sulphocarbolate, colchicum, juglandoid, and xanthoxyloid, besides sodium chloride and aromatics. This is put up in the form of a coarse granular powder, is readily soluble in hot water, and is not unpleasant to the taste. The most reliable indication for the use of this combination, and one in which I have never known it to fail of being useful, is a high urinary acidity. The simplest way with which I am acquainted of determining this acidity is by means of Harrower's sodium-hydroxide test. When the urinary acidity, as thus indicated, goes up, from the normal of from 30 to 40 degrees, as indicated by the acidimeter, to 60 or 80 degrees or more, as often happens, then you may safely prescribe this remedy, with the confident assurance that it will bring help and comfort to your patient, besides the reasonable probability of a cure; provided, of course, this remedy is properly used and continued for a sufficient length of time.

The patients to whom I first administered this mixture were selected because they showed a high degree of acidity of the urine, and their perspiration was so acid that it would tarnish chains and rings and gold and silver watches, and the like. One was a case of arthritis deformans of long standing in an elderly woman, and the other, one of alimentary glycosuria in a young man. I prescribed calomel, podophyllin, and the bile salts to be taken at night, with a sufficient dose of a saline laxative in the morning to insure free movements of the bowels. This treatment was attended by great benefit and improvement in each patient, but both were obliged to continue it almost uninterruptedly for two or three years in order to keep up

this improvement. In due time, however, conditions so changed that the improvement became virtually permanent, and it only was necessary for them to resort to the remedies in the occasional relapses occurring from unfavorable circumstances or lack of proper care. Of course, the arthritis deformans of these persons is not cured, nor ever will be; but the patient has been made vastly more comfortable and existence rendered more enjoyable by means of the remedy.

Another remedy of a somewhat similar nature, and which is of use especially in acute and chronic rheumatism, is composed of calcium carbonate, lithium carbonate, and colchicine, with aromatics. My personal experience with this combination has not been extensive, but it is considered a most effective remedy for many of the common manifestations of the uric-acid diathesis, such as lithemia, gout, lumbago, certain forms of eczema, and so on, in addition to the common forms of articular rheumatism.

There is nothing new in either of these combinations, and the physician may write his own prescriptions, adapting the drug and the dose to each particular case, if he pleases. There are decided advantages in this latter method; the only disadvantage occurring to me being that most physicians cannot write offhand, and many druggists cannot compound, prescriptions that will present the desired remedies in a form as compact, convenient, and pleasant for use as those which have been prepared by skilled pharmacists in large quantities.

By the rational employment of these and other remedies of the class, much may be done for the abatement of acidemias. The indications are not difficult to determine, nor are the remedies unpleasant to take—an important matter in chronic conditions, where the treatment must be long-continued. When in your practice you are confronted by conditions of this nature, you will find them worth trying; and, if you try them faithfully, making an intelligent application of the general principles which I have suggested and follow the special directions which you will find laid down in the books of active-principle practice, you may rest assured that you will accomplish much good for your patients.

Tuberculosis

Great headway has been made in recent years in the control and prevention of tuberculosis, and the present death rate is less than half as great as it was not longer than fifty years ago.

According to the modern management of tuberculosis, as practiced in sanitariums throughout the country, the three great fundamentals of treatment are: (1) fresh air; (2) rest; (3) forced feeding. Remember—air, rest, food.

However, even these commonplace agents require care and discretion in their employment, and much harm may be done by their injudicious application. Thus, even fresh air may be of the wrong temperature or humidity or in other properties, or it may be managed injuriously, as in the case of drafts when a patient is in a state of perspiration, or being cold air when he is heated. Many persons undoubtedly have taken cold and had their lives shortened by the routine but injudicious use of fresh air, without regard to other conditions.

So even rest should not be absolute, save in extreme conditions, but it needs to be mixed with a proper but variable amount of exercise (plus "brains"). Forced feeding is far from being an unmixed blessing, and I believe it to be in many instances a very unsafe proceeding, if not directly harmful. Not what is taken into the stomach but what is digested and assimilated is the measure of improvement. Each patient needs individual study, in order that the treatment may be adapted to his personal needs.

I am one of those who still hold to the old-fashioned notion that there are various medicinal agents that will aid greatly in the treatment of tuberculosis. Measures for the improvement of digestion frequently are called for, and when rightly used are of great value. Especially are they likely to be needed when forced feeding is the rule. Pepsin, pancreatin, papoid, and the various compound digestants many times are called for. Nuclein and lecithin are of value in strengthening the defensive forces of the system and in building up the nervous system. Iodine in its various forms, but oftenest (as a matter of preference) in the form of iodized calcium, benefits in many cases.

The Value of Creosote

A remedy in which I personally have great confidence is creosote. I can say this the more freely and strongly, because this is a remedy which has never been monopolized or even specially advocated by the active-principle medicationists. To my mind, creosote is to the respiratory organs what calcium sulphide is to the blood and tissues generally, the sulphocarbolates to the intestinal tract, hexamethylenamine to the urinary organs,

and so forth. It is both an antiseptic and an expectorant. It is of value in pneumonia in all its forms, in bronchitis, both acute and chronic, influenza, and tuberculosis. It loosens and lessens the cough, relieves irritation and promotes resolution and healing.

I have prescribed creosote in various forms, including plain creosote in pill and tablet, as carbonate of creosote (or creosotal), guaiacol, potassium sulphonate of guaiacol (or thiocol), and calcium creosote (or calcreose). Some of these are proprietary or patented preparations, and, hence, are open to boycott by the ethical purists. I do not like patented preparations, and I do not like trade-names of drugs; but, I can see that each of them has its advantages, and when I have found a remedy which benefits my patients, that fact alone outweighs all questions of ethics with me. And when a remedy has once established its usefulness in certain definite conditions of disease I prefer the original, even though it be a proprietary.

The use of creosote in tuberculosis is as old as the hills and is vouched for by a long line of our best therapeutists, from Reichenbach in 1833 down to the present time. Potter says of it that "in pulmonary tuberculosis, when well borne by the stomach and continued over a long period of time, it has probably proved more efficient than any other remedy."

Sajous states that "creosote is a valuable remedy in the first and second stages of tuberculosis, excepting those cases in which asthenia is to any degree marked." Thompson says: "The creosote treatment of tuberculosis is a curious revival, after more than sixty years, of the use of a drug which fell into disfavor after its original trial. It is, on the whole, the most satisfactory drug for tuberculosis." Bartholow writes: "Internally, also, creosote and carbolic acid, especially the former, have been used with conspicuously good results in the treatment of the several forms of consumption, except phthisis florida." Even Osler, who is very nearly a therapeutic nihilist, agrees that it "is an old remedy, strongly recommended by Addison; and the reports of Jaccoud, Fraentzel, and many others, show that it has a positive value in the disease."

Some Useful Preparations

I have had considerable experience in the use of thiocol (which is chemically the potassium sulphonate of guaiacol), principally in the treatment of pneumonia and the other acute diseases of the respiratory organs; and have come to think very highly of it. The special point in which it excels the cruder preparations is that it is not unpleasant to take and that it will be borne by the stomach in any desired dosage without creating any disturbance. I do not claim that it has any virtues other than those of creosote or its active ingredient, guaiacol; still, I consider it as one of the best, if not the best, of the preparations and derivatives of creosote. The only drawback to the use of thiocol is its high price (owing to the German patent, which must now be nearly expired).

As for calcium creosote, or calcreose, my experience with it has been much shorter and less extended. As to this preparation, however, there undoubtedly is an advantage derived from the calcium with which the creosote is combined. Clinical workers have seemingly demonstrated the theory that calcium starvation is a prime factor in the causation of tuberculosis. Lime-starved dogs fall easy victims to bovine tuberculosis, while the addition of calcium compounds to their diet cuts short the progress of the disease and they gain weight and are restored to health. (See Van Giesen and Lynah, *Medical Record*, Nov. 27, 1908, and July 1, 1909.) It is well known that calcium is essential to the formation of the fibrin element in the blood, and also that the healing of tuberculosis foci is largely a calcification process. In these facts I find the reason why calcium creosote acts so favorably in tuberculosis.

My attention was called to calcium creosote not very long ago by a medical friend who himself is a victim of tuberculosis, having suffered from repeated hemorrhages, but who still continues to do a good general practice in one of our New England cities. This doctor assured me at that time that he did not think he would still be alive were it not for the benefit which he had derived from the use of calcium creosote. So strongly was I impressed by this remark, coming from a man in whose judgment I had great confidence, that I at once began prescribing it for my own patients; and I have found it of great value.

One other method of treatment for tuberculosis remains to be spoken of, one which has been strongly advocated and as strongly condemned. This is the vaccine, or bacterin, treatment; that is, the use of the various preparations and cultures of the bacillus tuberculosis. The pendulum has swung high and swung low in relation to this much debated subject, from the days of Koch and his tuberculin, down to those of Friedman and his turtle-serum; and the question is still unsettled, with much difference of opinion

yet existing. On the whole, however, it may be said that the advocates of the biologic therapy are steadily increasing; and it seems probable that, with future improvement in the preparation and technique, this method will be generally accepted as one of the most important aids to the medical treatment of tuberculosis.

Epilepsy

The last of the chronic diseases to which I shall call your attention is epilepsy. This is a chronic nervous disease, characterized by recurrent general paroxysms appearing at variable intervals, and attended by loss of consciousness and sensation. Its principal forms are the grand-mal, or major epilepsy; petit-mal, or minor epilepsy, and Jacksonian, or cortical, epilepsy.

The theory of epilepsy generally accepted assumes the existence of a convulsion-center at the base of the brain, irritation of which will produce an epileptiform convulsion. The irritation may come from many different sources; but when once convulsions have been induced, no matter by what cause, they will be brought on more easily with each succeeding attack, until finally such changes have been wrought in the convulsion-center itself that thereafter the seizures occur at irregular intervals, without the intervention of any apparent cause.

Epilepsy does not belong to the class of self-limited, or spontaneously curable diseases. Its natural course is from bad to worse, until a fatal result ensues, either as a direct result of the disease or, more likely, from the many complications following in its wake. It is estimated that not more than ten percent of all victims are curable by any known method of treatment, while not more than fifty percent are benefited in any appreciable degree even by prolonged treatment.

You will see that these unfavorable statistics render the question of treatment of all the greater importance, and any plan of treatment which offers hope even in selected cases, worthy of careful attention.

In all cases of epilepsy, the first thing to be done is, to discover the primary source or cause of the irritation, and to remove or modify this as far as may be possible.

The most frequent exciting causes are to be looked for in influences arising from one of three directions: the digestive organs, the sexual system, the mental functions. Look out carefully for all possible sources of irritation in each of these three directions. Time will not allow me to go into detail.

If the cause can be determined, the next thing is, to remove it if possible, or, when this can not be done, to modify its effects or to render it comparatively inactive. In mild and incipient cases, no further measures may be needed to restore the patient to health; and in a large proportion of cases there will be more or less marked improvement, either permanent or temporary. If no cause can be detected (and this is often the case), we are accustomed to label such cases as idiopathic—although, strictly speaking, there probably are no idiopathic cases of epilepsy.

The second thing to be done is, to lead the patient into right habits of living, both as to diet and general hygiene. To do this, it is essential to secure the full cooperation of the patient himself. The food must be plain, simple, and easily digested, and the ordinary rules of hygiene as to diet must be scrupulously observed. Proteids should be allowed only in very limited amounts; still, I do not believe that they should be prohibited entirely.

The saltless diet is now very generally recommended for epileptics, but I have never seen any wholly satisfactory explanation of the benefits claimed for it. Indeed, in some patients it has been found that, while the paroxysms were measurably held in check by salt exclusion, yet, this was accompanied by a grave nervous condition, characterized by delirium and suicidal impulses, and all of which passed away when salt was restored to the diet. My own practice has been a compromise between the two extremes. I direct that no salt be used as a condiment, but I do not require that the food be prepared strictly without salt. This plan works satisfactorily for the patient, and saves much trouble for the family.

Moderate exercise, both physical and mental, is desirable, but all severe labor of body or mind should be strictly prohibited.

Medicinal Treatment of Epilepsy

The third indication consists in providing proper medical treatment. This includes general and symptomatic medication, of which I shall not speak further, as it is conducted wholly on general principles and needs no special description. It also includes, in those patients having a distinct aura, provision for some quickly acting means of relaxing the vasomotor spasm, overcoming the muscular contraction, and thus preventing the occurrence of the convulsion; the means to be employed at the first approach of the aura. The remedy most commonly employed for this purpose is the nitrite of amyl (pref-

erably from perles, which may be carried in the pocket), this to be inhaled at the earliest indication of the oncoming of the paroxysm.

However, the essential and important thing is, to overcome or to lessen the abnormal irritability of the convulsion-center. For this purpose, a multitude of drugs have been employed and are still being recommended. The one remedy which is almost universally used is the bromide of potassium or some other compound of bromine. But, while in some cases this is very beneficial in restraining the paroxysms, its secondary or incidental effects are unpleasant and injurious, producing depression, dulness, and mental hebetude, with partial or complete loss of mental power; while in a considerable proportion of cases no benefit is derived, the convulsions either not being affected or, not seldom, being made worse.

Under these circumstances, a study of other remedies is essential, and I shall introduce to your attention two drugs which I believe to be far superior to the bromides, as has been proved by the experience of numerous physicians during the past few years. These are, verbena hastata, commonly known as blue vervain; and solanum carolinense, the common horse-nettle.

Of verbena, I can speak from an experience extending over some twelve years or more. It is clearly a nerve tonic, and one of its earliest effects is in most cases to brighten up the mental powers of the patients and give them a more cheerful aspect. This is in marked contrast to the bromides.

Two Valuable Remedies

The class of cases in which I have found verbena to be especially beneficial includes, first, those in which the action of the bromides is distinctly unfavorable, rendering the patient worse instead of better; and, secondly, the comparatively mild cases, in which the convulsions are not extremely frequent or severe, nor are the mental faculties greatly impaired. This class includes most of the curable and a large portion of the improvable cases.

As to the preparation used, all my experience has been with the concentration, known as verbenin or (of late) verbenoid. This is prepared in tablets of 1-3 grain each, representing about 15 grains of the crude drug. Beginning with one, two or three tablets at a dose, give this dose before each meal and at bedtime. Increase by one tablet each a *day* (*not* one at each *dose*) continuing until either the convulsions are measurably controlled or signs of ill or unpleasant effects from the drug become manifest. I carry this augmented dosage, without hesitation, up to as much as six tablets four times a day, and have never met with untoward effects. In one or two cases, I have observed another result; namely, that the patient was not improved by this course, but actually grew worse. This, of course, is an indication for dropping the drug. When this occurs, I change to solanum carolinense.

The Value of Solanum

Solanum carolinense is a powerful antispasmodic and nerve sedative, and, unlike verbena, in large doses produces potent physiological effects. The general indications for its use I find in those cases where the bromides exert a beneficial effect on the convulsions (although at the same time producing secondary unpleasant effects); and, further, in all cases which resist the comparatively mild action of verbenoid. Theoretically, solanum should be of more value than the former remedy; but in practice I have found it far less frequently applicable; or perhaps I should say, I have found it to be distinctly helpful in far fewer cases than verbena.

I have given this drug in two forms; namely, the "specific medicine" of the Eclectics, and the alkaloid, solanine hydrochloride, of the Alkaloidists. The dose of the "specific medicine" varies from 5 to 30 or more drops, to be taken before meals and at bedtime. The alkaloid is prepared in granules of 1-64 grain, and the dose of these ranges from three to eight or more, taken four times a day. The rule of dosage is the same as for the other active principles: begin with the minimum dosage and increase until the desired effect is produced.

I have given only the briefest outline of the treatment which I recommend. Should any of you desire more complete details, I shall be pleased to send you reprints containing a fuller discussion and more definite instructions.

In closing, let me say, Remember that epilepsy seldom is cured. Do not expect too much. When you have found a remedy which exercises a reasonable degree of control over the convulsive attacks, do not forget that it should be continued indefinitely, varied as to dose according to the needs of the case. Never pronounce a patient cured until at least two years have passed without any return of the paroxysms.

American Medical Fraternities

The Development of Greek-Letter Societies

By Benjamin H. Frayser, Ph. G., M. D., Panama, Canal Zone

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THE companionship of good men is a thing that is interesting in study. When an organization has for its object the development of character that will make a better student of the young man while in college and a more useful professional man when he enters the arena of life, it is an institution that every member of the profession should know of. For men in our profession to champion organizations that stand for a high and clean moral standard, for intrinsic worth in the profession, and for medical ethics, is, indeed, praiseworthy.

Origin and Development

December the fifth is a date that every man in the bond of the "Greeks" should celebrate. For, on December 5, 1776, Phi Beta Kappa first saw light and became the founder of that great system of Greek-letter fraternities that mean so much to healthy college-men. It was in the Apollo Room of Raleigh Tavern at Williamsburg, Virginia, where the meeting was held, and the selected members were students of the renowned College of William and Mary, the college of Jefferson. In that same room only a few months previous there occurred one of those great oratorical outbursts by the colonial Demosthenes, Patrick Henry, who by his mighty eloquence, here displayed as well as elsewhere, had finally led the hesitating Virginians to sever relations with the mother country and thus made possible the foundation of a new nation.

In such an environment, it is not strange that the students assembled on that eventful night should have entered into a field of activity new and untried. By solemn obligations of mutual fealty, they formed a secret society, to be known to the outside world by a combination of Greek letters, initials of the name proper; the latter a motto ever to be held in inviolate secrecy. Future meetings were planned and extension of the organization to other American colleges was looked forward to.

The purposes of Phi Beta Kappa were to be the enhancement of the social side of college life and the promotion of higher culture. These embryo fraternity men adopted a grip, password, and a badge. Thus was Phi Beta Kappa conceived and organized. It should be quite an honor for the fraternity man of today to point back to the time, the place, and the men who began a movement which, in its continuity of development, has grown into the Greek-letter system of today.

Elisha Parmele of the parent chapter established chapters at Yale in 1780 and at Harvard in 1781. These chapters established another at Dartmouth in 1787, and one at Union College in 1817. As years rolled by, scholarship became the chief factor of eligibility to membership in Phi Beta Kappa. In 1831, the fanatical antisecret-society movement swept through the United States, and such great pressure was brought to bear on the chapter at Harvard that it surrendered its secret work and became an honorary scholarship fraternity. Today the Phi Beta Kappa key is a decoration for scholarship, and college men and women everywhere covet the honor.

Eight years after Phi Beta Kappa established its chapter at Union College, Kappa Alpha was founded. Kappa Alpha (Northern) it is now termed, to distinguish it from the fraternity of the same name of the South. Union College gave to Greekdom two other societies in 1827; these being Sigma Phi and Delta Phi. Sigma Phi established a chapter at Hamilton College, New York, in 1831, thus following Phi Beta Kappa in expansion. Sigma Phi's chapter at Hamilton stimulated the organization of Alpha Delta Phi in 1832, and the year following Psi Upsilon was founded at Union College. Kappa Alpha founded its first branch chapter at Williams College in 1833 and called it "Massachusetts Alpha," thus carrying out Phi Beta Kappa's idea of extension. Another body of college men founded Delta Upsilon at Williams College in 1834; no doubt prompted by the presence of Kappa Alpha.

Thus was the Greek-letter system of fraternities launched forth as a permanent feature of college-life. Today we find 36 recognized national academic fraternities, 1527 chapters, and an aggregate membership of 249,224. Among the professional schools,

we find 39 fraternities, 644 chapters, 240 lodge-houses, and an aggregate membership of 68,360.

The Professional Fraternities

The professional fraternities date back as far as 1860, when Phi Delta Phi was founded in the law department of the University of Michigan. In 1882, Nu Sigma Nu was founded in the medical department of the University of Michigan and was the first medical fraternity having a continuous existence. Nu Sigma Nu has always upheld its high standard and has established more than 30 chapters in the best medical schools of America. The alumni of this fraternity number 4375 physicians, who are organized in alumni chapters. Alpha Kappa Kappa was founded at Dartmouth in 1888 and numbers over 4500 physicians as members of the 38 active chapters. A. K. K. owns a $10,000 lodge in Ann Arbor, Michigan, and another, valued at $8500, in Galveston, Texas.

Another body of medical men organized Phi Alpha Sigma at the Bellevue Hospital Medical College in 1888. This order has always been conservative in extending its chapters and, with A. M. P. O., may be classed as an eastern fraternity. In 1889, Phi Chi medical fraternity was founded at the University of Vermont, and just five years later another medical society of the same name was organized in Louisville, Kentucky. In February, 1905, representatives of the northern and southern orders met and decided to consolidate, thus placing Phi Chi high up on the list of medical orders. In 1903, Dr. J. Ansley Griffin founded the Chi Zeta Chi Medical Fraternity in the medical department of the University of Georgia, and this order began to extend its chapters to the best medical schools in the United States. The rapid growth of this fraternity has been commented upon by the lay press more than once. Northwestern University, Chicago, has given to the medical schools Phi Rho Sigma, which ranks very high and numbers among its members many eminent members of our profession.

Other medical fraternities are: Omega Upsilon Phi, founded at Buffalo in 1894; Pi Mu, founded at the University of Virginia in 1892; Phi Beta Pi, whose Alpha Chapter was founded at the West Pennsylvania Medical College in 1891; Phi Delta, founded at Long Island in 1901, and Kappa Psi, which is a medical-pharmaceutical order.

In the homeopathic schools, we find Pi Upsilon Rho, which began in the Hahnemann Medical College, Chicago, in 1876, and Phi Alpha Gamma, which was founded in the New York Homeopathic College, March 25, 1894. Phi Alpha Gamma owns a lodge in New York, valued at $25,000.

Alpha Omega Alpha is the one national honor fraternity that exists in medical colleges. This honor-order is very much like Phi Beta Kappa, in that admission is based on scholarship alone. It was founded in the University of Illinois, Department of Medicine, in 1902, and has granted charters to some of the best colleges in our country.

OUT-OF-DOORS

By Martha R. M'Cabe

Oh, it's ho! for the fields today!
For the sweet, wide, out-of-doors!
For the air, like wine,
For the crisp sunshine,
And the asters along the way.

And it's ho! for the quiet wood!
For the flame on bush and tree!
For the stream, leaf strewn,
For the rifle's tune
And the quail with her scuttling brood,

Oh, it's ho! for the everywhere
That's out under heaven's blue;
For meadow and stream,
And the hillsides a-gleam,
And the autumn that's in the air.

JOHN CLARK RIDPATH

By James Newton Matthews, M. D.

EDITORIAL NOTE.—This poem, heretofore unpublished, was found among the effects of the late Doctor Matthews, by Mr. Walter Hurt, who has very kindly sent it to us to be printed in "Clinical Medicine." It will interest our readers to know that Doctor Matthews and Professor Ridpath were cousins, a fact which explains the strain of deep and abiding love which runs through this beautiful poem. Have you a copy of Doctor Matthews's posthumous volume of poetry, "The Lute of Life"? His verse rivals that of his old friend, James Whitcomb Riley. Shall we try to get you a copy?

A common man among us, that is true,
  A common fellow-townsman, that is all,
  Who casts no larger shadow on the wall
Than is the shadow thrown by me or you,—
Whose eyes than ours are not more deeply blue,
  Whose strength of sinew not more great, withal;
  A cordial brother, quick to come at call,
And do whatever duty prompts to do.

He walks the world with much the self-same air
  Of other men,—with kindly eyes, and hands
Of gracious greeting,—planting here and there,
  In some tear-channeled soul that understands,
  A word of cheer, which, like a seed, expands,
And, in its own time, blossoms to a prayer.

Such the faint outline of the outer man,—
  We think we know him, but we do not know;
  His soul possesses what surpasses show,
A shifting kingdom we can never scan;—
His vision, like a coursing Condor, can
  On virile pinions vibrate to and fro,
  Across the past, and trace the darkling flow
Of destiny, through God's unfolding plan.

Not Janus gray with double-sight could see
The things that were, and things that are to be,
  More clearly than the comprehensive ken
Of him, the dear historian, at whose call
Old Time's sepulchred empires rise and fall,
  And tombs are emptied of their Christs again.

The playground of his fancy is the past,
  His daily comrades are the gods and kings,
  The prophets and the bards, whose glory rings
The universe. Upon his soul are glassed
Scenes more stupendous and events more vast
  Than strained imagination ever brings;
  His antique spirit, like a spectre, clings
To mould'ring shrines and temples overcast.

Tonight, he banquets in old Babylon,
To-morrow, on the plains of Marathon,
  He'll meet the Persian with Miltiades,—
Or march with Rome to flay the fiery Hun,
Or, with Columbus, chase the falling sun
  Behind the billows of the western seas.

Not his the politician's idle rage,
  Nor polished demagogue's delusive ways,—
  He reads in records far beyond their gaze,
A deeper meaning on a broader page;
Mounting the ladder back, from age to age,
  He stands a-tiptoe on the farthest days,
  And from their height each human stream surveys,
And maps its course, and does the end presage.

The rabble and the mob to him are but
  The froth—the foam—the babble of the waves,
That fret their little lives out on the beach;
He looks beyond them where the headlands jut,
  And hears the deep sea thundering in its caves
A meaning mightier than his tongue can teach.

The poet and the prophet blend in him—
  The strident voices of the world he hears,
  Not with the dissonance that jars our ears,
But softly as the cadences that swim
From some Arcadian valley, dewy-dim,
  Or as the very music of the spheres;—
  He hears the pulses of the passing years
Play thro' the planet a perpetual hymn.

And so we reverence the master-mind
  That sifts the ashes of the past, and lays
Its priceless ingots in our lifted hand;
So nobly hath he wrought the tasks assigned,
That in the annals of his native land
  His fame will journey to remotest days.

What Others are Doing

IS HISTIDIN A CAUSE OF ANTITOXIN URTICARIA?

An interesting suggestion is thrown out by Allen Eustis, of Tulane University (*N. O. Med. & Surg. Jour.*, April), who is making a study of the connection between putrefying histidin in the intestine and asthma as well as urticaria. Having plausibly established such an etiologic relationship, Doctor Eustis ventures a step further.

Histidin, when fermenting in the intestine, gives rise to betaimidazolylethylamin, and this in turn, upon entering the circulation, incites the itching skin-rashes. But histidin is one of the amino acids formed during the pancreatic digestion of proteids, hemoglobin yielding as much as 10 percent. Further, Vaughan found that protein introduced into the blood current is digested parenterally, generating toxic bodies.

Now, argues Eustis, inasmuch as the horse-serum of antitoxin contains proteids, while the latter contain histidin—and this, again, is so easily converted into the said betaimidazolylethylamin—does it not seem rational to assume that this poisonous compound is set free in the circulation after the injection of diphtheria antitoxin, and that thus is given an explanation of the urticaria observed to follow its administration? And he adds: "Certainly, treatment of antitoxin urticaria yields most readily to therapy based upon this idea."

PALLIATIVE SYMPTOMATIC TREATMENT OF TOXEMIC URTICARIA

Carefully observing during ten years, Allan Eustis has not encountered (*N. O. Med. & Surg. Jour.*, April) a single case of "idiopathic" urticaria in which intense indicanuria could not be established and which failed to yield to proper eliminative treatment.

However, in this connection he mentions the palliative symptomatic treatment of troublesome acute attacks that has been proposed by A. W. Swaun (*Amer. Jour. Med. Sc.*, 1913, p. 373); namely, the injection of adrenalin. This is the claim set forth: the hypodermic injection of a 1 : 1000 solution of adrenalin, followed in twenty or thirty minutes later by a second, similar, dose, as a rule will afford instantaneously complete relief from the intolerable itching, and a complete disappearance of all lesions for some four to eight hours. If this relief does not follow, one may be assured that the trouble is erythema multiforma rather than urticaria.

The fact that adrenalin locally applied will not prevent any experimental urticaria, as also because of the reappearance of the lesions after a while, the author holds, "lends weight to the theory of a toxic origin of the disease, and suggests that adrenalin acts as a hormone stimulating the cells to generation of the neutralizing substance.

DEATHS FROM POISON IN GREAT BRITAIN

Some interesting figures regarding deaths by poisoning in Great Britain are collated by *The Pharmaceutical Journal* (July 4, p. 3) from the latest annual report of the Registrar-General. According to this report the number of deaths from poisons and poisonous substances in 1912 was neither materially larger nor smaller than the average for recent years. There were 122 deaths caused by accidental poisoning with scheduled poisons, and 102 deaths from accidental poisoning with nonscheduled substances.

Of suicides there were 547, 347 being committed by taking scheduled poisons, while 200 took nonscheduled substances.

Of the accidental deaths, opium (including laudanum and morphine) was responsible for 48; carbolic acid, for 17; veronal, for 12; alcohol, for 10; ammonia, for 9; hydrochloric acid, for 8; arsenic and oxalic acid, each for 7. Mercuric chloride—which figures so largely in American deaths by poisoning—caused but 3 deaths from accidental poisoning in Great Britain during the year 1912.

Heading the list as a cause of death in suicides, we find carbolic acid, with 88 deaths to its credit; next was hydrochloric acid, with 86. Then follow oxalic acid, with 84; opium

(including laudanum and morphine), with 52; potassium cyanide, with 41; hydrocyanic acid, with 36; ammonia, 20; strychnine, 11; mercuric chloride, 10; phosphorus, 9.

A large number of other deaths were the result of a variety of poisons. In 61 suicides and in 28 accidental deaths, the nature of the poison was not ascertained.

The most interesting feature of this report, to us, is, the record of deaths from anesthetics, of which there were 283 during the year. Chloroform headed the list, with the enormous total of 117. Next followed chloroform and ether, with 24, and ether alone, with 22. The A. C. E. mixture was responsible for 5 deaths, and ethyl chloride and nitrous oxide for 2 each. Scopolamine (hyoscine) destroyed but 1 life. Of deaths from anesthetics in which the name of the agent employed was not stated, there were 102.

Plainly, the public realizes but faintly the mortality resulting from the volatile anesthetics. Compared with the 163 deaths caused by chloroform and ether, separately and in various combinations, the danger from the other anesthetics is insignificant, indeed. It is notable that scopolamine, which we believe is considerably used in Great Britain in association with morphine, as it is here, was responsible for but a single authenticated death.

INTRAPERITONEAL USE OF ORGANIC SILVER IN PURULENT PERITONITIS

After diffuse purulent peritonitis has set in, operative intervention aims to remove the source of the infection, and subsequently the physician strives to destroy any remaining nocuous agents, since, naturally, the irrigation following an operation can not be expected to remove all germs from the abdominal cavity, and it cannot be repeated. In order to meet this latter difficulty, the surgeons of the municipal hospital at Bernburg, under the direction of Professor Hagemann, have been conducting experiments, with a view to destroying the pyogenic germs by injecting directly into the abdominal cavity a solution of collargol.

The results of extended observation have been published by R. Jelke (*Muench. Med. Woch.*, 1913, No. 33), and he claims that they have been sufficiently encouraging to justify further trials. The solution employed was of 2-percent strength, from 30 to 50 Cc. being introduced into the abdomen, through the drainage opening, by means of a uterine syringe; the nozzle being made to enter all the recesses.. If desired, a larger volume of a weaker solution may be injected.

This silver solution, while causing relatively little irritation of the peritoneum, is rapidly absorbed, entering into the circulation concurrently with the pyogenous noxa.

Results, naturally, cannot definitely be postulated. Many patients have would gone on to recovery without being subjected to this measure, while many when coming under observation are beyond reasonable hope. With this idea in mind, the author is convinced—and gives several examples—that quite a number have been saved who otherwise would have perished.

HEAT AS A REMEDY FOR BOILS AND OTHER ABSCESSES

The editor of *The Journal of Advanced Therapeutics* declares (see March issue, p. 97) that a modern and practical method of treating boils, felons, carbuncles, otitis media, and sinus disease is through the employment of radiant light and heat, with reflected and direct rays from an arc or incandescent lamp, making applications of an hour's duration at a time once a day, or more frequently in severe cases.

Similar results, according to this author, can be obtained in a simpler way by immersing the affected part, when possible, in hot water kept (by frequent additions) at the highest temperature that can be tolerated. For instance, when treating a felon, the finger may be kept in hot water for two or three hours continuously, and, if treatment is taken before pus formation, it is declared that the felon in every instance will be aborted.

The writer also declares it is possible to abort suppurative tonsillitis, before pus formation, as follows: After first applying a mustard plaster, a cloth wrung out of hot water is placed over the surface of which the indurated gland is felt to be the center. Over this many thicknesses of woolen cloth which have been moderately heated in the oven are applied, changing every fifteen minutes and keeping up the applications for five hours. The writer declares that by this means an early quinsy can readily be aborted.

Simple methods of treatment like these are to be commended warmly, but they should never be used to the exclusion of the indicated remedies. We have great faith in *thorough* saturation with calcium sulphide, bacterins are giving brilliant results, while eliminative

and supportive measures, with local antisepsis, are practically always indicated.

AN ANALYSIS OF PSYCHOANALYSIS

That not every clinician is carried away by the raging cult of Freud's psychoanalysis, is amplified by the position of Engelen (Duesseldorf), who discusses this topic in the *Deutsche Medizinische Wochenschrift* (1914, No. 19). Speaking of the various factors principally contributing to the reported successful cures accomplished through this mode of treatment, the author enumerates them as follows:

The gratifying "very thorough" examination of the subject; the unusualness as well as only mistily understood nature of the cure; the fascination exercised; the sectarian atmosphere attaching to the movement and its adherent; the almost religious worship paid to the emotional life, particularly of the sexual sphere, of the patient; and last, but by no means least, the high cost of the procedure; all these elements of psychoanalysis tend to impress forcibly certain natures.

However, what great harm it is possible to create by this method is illustrated by the story about a certain young woman, who had "examined into" her the conviction that black color was disagreeable and irritating. As a result, this unfortunate creature now has been made chronically unhappy by the mere sight and contemplation of her husband's black hair—a "weakness" of which she was ignorant until the dissection of her soul à la Freud had reminded her of it. Says the author: A neurotic person should not be taught to cultivate vague, muddled feelings, but, rather, should the aim be to arouse in him a strong self-consciousness and to teach him the liberating value of action.

EMETINE IN PNEUMONIA AND BRONCHOPNEUMONIA

In a paper read by Louis Rénon before the Medical Society of the Hospitals of Paris (cf. *Gaz. d. Hôp.*, Mar. 12, p. 491), he gave his experience with the use of emetine hydrochloride in the treatment of pneumonia.

Rénon administers the drug subcutaneously in 2- to 6-centigram (1-3 to 1 grain) doses. He declares that in pneumonia it has no specific action and the course of the disease is not cut short, but the temperature falls, the disease disappearing by lysis; the dyspnea is reduced, the whistling râles are rapidly replaced by large subcrepitant râles. In bronchopneumonia, the beneficial action of emetine is even more clearly beneficial. In old patients, in severe cases, under injections of from 4 to 6 centigrams (2-3 to 1 grain) of emetine hydrochloride, the temperature drops, the dyspnea diminishes, and large râles replace the sibilant râles, while the expectorate becomes more abundant and is coughed up with greater ease.

Doctor Rénon declares that the favorable action of emetine in pulmonary affections is decidedly superior to that which follows the use of ipecac, as formerly employed.

This report is strictly in line with the experience of many thousands of American physicians who for many years have been prescribing emetine for bronchial affections and have found it good. Probably equally good—or even perhaps better—results could be obtained by giving the drug in small, frequently repeated doses, to effect.

MANAGEMENT OF BURNS

If the pain and nervous excitement following a burn are considerable, John C. Plain (*Amer. Jour. of Surg.*, Mar., 1914, p. 117) secures relief by means of hypodermic injections of morphine and atropine. Usually, however, the patient can be made fairly comfortable by immersing the burned part in cold water alkalinized with sodium bicarbonate; or, in lieu of immersion, compresses wet with this solution may be used to cover the affected area.

Doctor Plain condemns two things sanctioned by the schools: first, the puncture of blisters immediately following a burn, and, second, the use of carron oil. The following line of treatment is recommended:

As soon as the patient is fairly comfortable, the alkaline bath is discontinued, the burned area and surrounding surface are sprayed or mopped with hydrogen-dioxide solution, the entire surface dried with gauze, and finally the part covered with strips of gauze previously soaked in a 2-percent solution of picric acid in dilute alcohol. The part is then covered with a thin layer of cotton held in place with adhesive straps or a roller bandage. As soon as the dressing is soiled it is removed and the part redressed as already described.

About the third day, the blisters are opened and the escaping fluid is carefully mopped away. When sloughing occurs, the dead tissue should be removed as rapidly as it becomes loosened, after which the lesion is treated with the solutions of hydrogen peroxide and of picric acid as already described.

Over the denuded area strips of rubber tissue previously immersed in bichloride of mercury solution may be imposed.

SPARTEINE: IS IT A VASCULAR RELAXANT?

We have been so accustomed to look upon sparteine as a heart tonic that the results secured by Leslie Byron Wiggs (*Old Dom. Jour. Med. a. Surg.*, May, p. 237), in a series of experiments with this drug, come to us with considerable surprise.

Testing out sparteine upon the hearts of frogs, Wiggs has arrived at the positive conclusion that, instead of its being a cardiac tonic, this alkaloid belongs to the same class as coniine and gelseminine. He says that there seems to be neither experimental nor clinical proof that sparteine has an action like or similar to that of drugs of the digitalis series, although it does produce very transitory peripheral stimulation of the motor ganglia of the vessel-walls. He contends, indeed, that it directly depresses the cardiac muscular action. It slows the rate of the heart, but at the same time it markedly diminishes the heart-tone.

Seemingly, the action of sparteine is exerted through the nervous system rather than directly upon the heart-muscle. As a result of his work, Doctor Wiggs considers that in conditions of falling heart-power sparteine is contraindicated, and that recovery here, after its administration, occurs in spite of rather than in consequence of this drug. Experiments on dogs also seem to demonstrate that sparteine is not a diuretic.

THE TREATMENT OF BRONCHOPNEUMONIA

Antipyretic drugs never should be administered in bronchopneumonia. So declares Dr. Solomon Solis-Cohen in the January number of *The Medical Times*. Ordinarily he does not use the ice pack, although it may be employed to advantage in tuberculous cases when the temperature exceeds 100° F. Sponging the entire body twice daily with tepid water and aromatics or with alcohol adds to the patient's comfort. In delicate children and the aged and feeble, hot applications (even hot plunge-baths for the children) are to be preferred.

Treatment should begin with a thorough cleaning out of the bowel; calomel, castor-oil, alkaline laxatives, and enemata being used for this purpose. Doctor Solis-Cohen also employs the bacterins and serums, and he declares that mixed bacterins may soon be developed to a point of specificity. In these cases, he prefers serobacterins. Quinine and urea hydrochloride, injected intramuscularly, is of great service. In tuberculous cases, and sometimes following measles and whooping-cough, creosote carbonate is indicated.

At the outset, in the aged and in children, strychnine, 1-250 to 1-120 grain, should be repeated at intervals of one to six hours. When there is marked cardiac or respiratory debility, the strychnine should be supplemented by atropine or camphor. For a young child, 1-2000 grain of atropine hourly is a good dose. The ammonium preparations frequently are useful. Opium ought to be employed but very rarely. Various heart tonics are recommended and should be given according to their special indications. When there are symptoms of suffocative catarrh, occasional emesis may be resorted to. Ipecac may be given by the mouth or apomorphine hypodermically. When resolution is sluggish, ammonium iodide may be prescribed.

IDENTITY OF YOHIMBINE AND QUEBRACHINE

An exceedingly interesting observation has been reported by E. Fourneau and N. T. Page in the *Bulletin de Pharmacologie* for January, these writers asserting that the alkaloid quebrachine, derived from the bark of quebracho blanco, and the alkaloid yohimbine, obtained from the bark of corynanthe yohimbe; not only are isomeric, but actually are absolutely identical.

Four salts of the two bases were examined, namely, the hydrochloride, the tartrate, sulphate, and oxalate, and their analyses of the two classes of salts proved them to be identical in every instance. The color reaction, chemical tests and optical rotation are exactly the same for yohimbine and for quebrachine.

It is said that only one other instance is on record where the same identical alkaloid has been discovered in plants belonging to entirely different plant families; the other instance being that of berberine.

This discovery no doubt will throw considerable light upon the pharmacology of this interesting alkaloid, the therapy of which now must be revised according to our new knowledge. Yohimbine, as doctors well know, has been much exploited as a remedy for sexual impotence, while the principal vogue of quebrachine is that of a respiratory stimulant.

Let us hope that the substance, under whatever name it be, will be more closely studied hereafter.

SILVER NITRATE LOCALLY FOR PERTUSSIS

A suggestive paper on the local treatment of whooping-cough is published by Doctor Ochsenius, of Chemnitz, in the *Therapie der Gegenwart* for November, 1913. He sets forth that, in its inception, the disease is a purely local infection of the upper air-passages, and that its extension downward, as well as its secondary complications, ought to be preventable by timely energetic treatment of the throat. Unfortunately, the general ineffectiveness of our therapy (despite the ever multiplying legion of remedies recommended) confirms the popular notion of (relative) medical helplessness, and, thus, keeps doctors from seeing the victims in the early stages. This obstacle doctors should strive to overcome by teaching and making good.

Logically, the progress of the disease should be stayed by destroying the pathogenic germs in the pharynx. But, the author was impressed with the fact that, originally, whooping-cough presents only the picture of a pharyngitis, and then also of rhinitis; and this suggested to him the possible utility of that old standby, silver nitrate. Lunar caustic, he reasoned, not alone would kill the bacteria, the superficial germs, but would also destroy their nutritive substratum, the mucous membrane; at all events, its astringent action would cause diminished secretion of mucus, and, hence, a decreased number of coughing attacks. Furthermore, the suggestive influence would be appreciable, also. Results, in practice, were eminently satisfactory; best, of course, when the treatment was instituted within the first or second week and the infection had not extended beyond the pharynx.

A 2-percent solution of silver nitrate is employed. Every other day the entire pharyngeal region is swabbed thoroughly, using a cotton tampon; this being continued regularly for two weeks. (For nurslings, daily treatments at first are recommended.) Then interrupt for three, five, seven days, to observe the effect. (After the first few treatments the seizures may be worse; and parents must be so advised.) At this time there often is a sudden improvement; if, however, the attacks continue, the treatments are to be resumed for a week or so. (At times, though, a single application has sufficed.) Of course, if this treatment is not begun in the earlier stages, recovery will be more protracted. However, one case is cited, that of an 18-months-old infant, which had 65 severe seizures in twenty-four hours and was cured in three weeks.

Altogether 94 children ranging from 1-2 year to 7 years and 1 of 13 years were subjected to this treatment (in 12 more it was not carried through), and 84 were cured. Virtually the only additional measures consisted in twice daily cleaning out the nose with a 1-percent (or 0.5 p. c.) solution of hydrogen dioxide, prescribing thymipin [Presumably a very recent synthetic.—ED.], and breathing fresh air—but guarding against chilling drafts.

Ordinarily the number of seizures was little influenced during the first week, but their intensity was greatly diminished, as were also the nocturnal and the double-attacks, and secretion became less; the cough approaching more that of a catarrhal nature. The spastic stage was greatly shortened. Also, there was less vomiting; but, fluids were being largely withheld. Incidentally, the more intractable cases were those where there existed an exudative diathesis, these subjects also tending to develop pneumonia.

In addition, the author endeavors to impress his readers with the importance of suggestibility as a factor in the cure and the prevention of the disease. He cites one robust mother who said, "For the whooping-cough, there belongs the horsewhip;" the idea being that these children will cough imitatively, by habit, and because of the sympathy cherished. Because of the "psychic infection," hospital treatment always is less satisfactory, and it is advisable to isolate the victims. Further, while silver nitrate in the throat will act as a germicide prophylactic, the children affected will restrain the injurious coughing if told that, the less they cough, the sooner these nasty swabbings will cease. The same is true for the vomiting.

In conclusion, Doctor Ochsenius points out the error of treating pertussis in a routine way, instead of individualizing in every case, reminding that neuropathic children are the more susceptible. He, further, subscribes to the growing belief that the disease is not a specific one, but, like pneumonia, merely a clinical collective conception; quoting Czerny as one authority. In support, he cites the frequent observation that adults have suffered from a plain catarrh, and then their children, positively not exposed to infection, contracted typical pertussis.

This method of treatment suggests, also, the internal use of silver iodide in pertussis, which has been recommended in these pages. In conclusion, we wish to call attention again to calcium sulphide, which is the best *single* drug for whooping-cough with which we are familiar. Next comes atropine.

TWO TYPES OF INFANTILE DIARRHEA

While many acute disturbances of the gastrointestinal tract in children arise from errors in feeding or a temporary inability of the individual infant to digest its food, we now know that there are many cases of a severe type, in which we have to deal with a serious bacterial infection. Diseases of this character are just as truly infectious diseases as are typhoid fever or pneumonia.

As Richard M. Smith says, in *The Boston Medical and Surgical Journal* (Nov. 20, 1913, p. 756) diseases of this type generally are characterized by a sudden onset after a short incubation period; rise in temperature, often to 104° or 105° F.; prostration, sometimes amounting to collapse; vomiting and diarrhea —both beginning early — the stools often containing pus, blood, and mucus; together with such nervous symptoms as twitching, restlessness, and convulsions. In the severer cases, there are marked loss of body-fluids, depressed fontanelles, hollow eyes, dry skin, sunken abdomen, and modified breathing.

From a study of these severe infectious diarrheas, Doctor Smith concludes that there are at least two fairly common types. Of these, the first is caused by the dysentery bacillus, either of the Shiga or the Flexner type. This dysenteric variety has received the greatest amount of attention. In the second variety, he believes, the gas-bacillus is the causative factor.

The symptoms of these two varieties, however, are so much alike that it is exceedingly difficult to differentiate them by clinical symptoms alone. A study of the stools, therefore, is essential to a thorough understanding of the case and, according to the deductions of Doctor Smith, also to the most intelligent treatment.

The dysentery bacillus, as Kendall points out, when grown in media containing an excess of carbohydrates, utilizes these first and as long as carbohydrates are present it appropriates only enough of the proteid material in the intestine to satisfy its nitrogen requirements. Under the circumstances, the larger the percentage of carbohydrate present in the food, the smaller the percentage of toxins produced because the proteins are not then attacked.

The gas-bacillus, on the contrary, will continue to multiply almost indefinitely in the presence of carbohydrate food, since it generates very little acid and, therefore, its reproduction is not self-limited.

Doctor Smith's conclusions, accordingly, are that, when the infection is of the dysentery-bacillus type, the patient will do badly on protein feeding and well upon a generous carbohydrate diet. In infections of the gas-bacillus type, on the other hand, the patient will do well on a diet low in carbohydrates, though relatively rich in proteins. In the latter cases, the patients do best upon soured milk, which is a food of low carbohydrate and high protein composition, while in addition containing lactic acid—the latter detrimental to the development of the gas-bacillus. Doctor Smith declares that its beneficial action on patients ill with gas-bacillus infection has been proven conclusively.

To the general practitioner, the moral is—examine the stools. Ascertain what bacteria are present in the discharges. If you are not able to do this yourself, get someone, who knows how to do it for you.

THE TREATMENT OF PYORRHEA AND FURUNCULOSIS

The treatment of Riggs' disease (pyorrhea) has been notoriously unsatisfactory. While local applications, together with internal medication for the associated acidemia, have given quite satisfactory results, even this method is far from ideal. The same may be said of autogenous bacterins, which, while they may relieve some cases, as a rule do not seem to be highly curative.

These facts give special interest to a paper by F. Tweddell in *The Medical Record* (July 4, 1914, p. 16). Doctor Tweddell has had such good results in the treatment of furunculosis with teaspoonful doses of powdered sulphur three times a day that he decided to extend this method of treatment. He finally rejected the sulphur on account of its manifest disadvantages, substituting dilute sulphuric acid therefor, giving the latter in 30 to 60 minim doses, diluted in two to three ounces of water, three or four times daily, the mouth to be well rinsed immediately after taking each dose.

The effect of this medication upon boils and carbuncles was astonishing in every instance. He therefore decided to try the

same method of treatment in pyorrhea. He describes in detail its application in one such case. The patient had already had two teeth extracted and the right lower molar was very loose and very sensitive, so that the patient could not masticate his food properly. The surrounding gum was inflamed and there was a discharge of pus from the gum border, while the gums around every tooth showed inflammation and pus could be expressed.

This patient was placed upon the sulphuric-acid treatment, in the manner already described, and, when he visited his dentist four days later, the loose tooth was found firm, the inflammation had subsided and the discharge of pus had ceased.

Doctor Tweddell says that several cases of pyorrhea alveolaris have been treated in the same way and all have been benefited. However, the teeth remain very sensitive to cold liquids, owing to retraction of the gums.

Doctor Tweddell says that small doses of sulphur are of no value, and if improvement does not occur within 48 hours, then the dose should be increased. How the remedy acts he does not undertake to explain, although he believes that the circulation of sulphur trioxide in the blood somehow exercises a bactericidal action. Of course, the patient who suffers from pyorrhea alveolaris should consult a dentist, and we may also add that of course the physician should correct any underlying faulty metabolism, such as acidemia, which usually will be found present.

It will be interesting to know just what could be accomplished with very large doses of calcium sulphide in cases of this character Here is an interesting field for clinical investi gation.

EMETINE TREATMENT OF PYORRHEA

At the last meeting of the Pennsylvania State Dental Society, Dr. M. T. Barrett, of the Dental Department of the University of Pennsylvania, reported some exceedingly interesting work upon pyorrhea undertaken in collaboration with Prof. Allen J. Smith, of the Department of Pathology of the university. This work is reported in the August, 1914, number of *The Dental Cosmos* (p. 948).

Careful examination was made of the gums and pericemental tissue in forty-six persons suffering from pyorrhea of various degrees of severity. In everyone of the cases examined, Barrett and Smith found amebæ present in the patient's mouth, all in a state of active motility. While they have not as yet identified them accurately, they believe that at least two species have been isolated in the contents of the pyorrhea-pockets.

In considering methods of treatment, the authors thought it worth while to use emetine in these cases of pyorrhea. This remedy, as has already been stated in these columns, was introduced by Leonard Rogers for the treatment of amebic dysentery, and its introduction into the therapy of that disease has been followed by brilliant success. Barrett, therefore, determined to give it a trial for the cure of pyorrhea.

For the purpose indicated, the emetine is employed locally. At first a 1-percent solution of emetine hydrochloride was injected into the pockets around the affected teeth; but this seemed to produce a transient irritation of the gums, and, so, the solution subsequently used was one of only 1-2-percent strength. To use, the needle is forced down into the pocket, the point passing directly into the wall, and, as it is being withdrawn, the cavity is left filled with the solution.

Thus far 13 individuals have been treated with emetine in the manner described. In several of these, the pus disappeared completely, to gross inspection, within twenty-four hours after the application was made, and in every one of the thirteen cases this result was obtained after three daily injections. At the same time the tissues took on a more and more healthy appearance, the teeth became firmer, and the gums settled down more tightly about the roots of the teeth.

In none of these cases have the amebæ been found after the second or third treatment. Usually, it seems, complete apparent cure has been obtained after five or six such treatments, although the remedy has not been tried long enough to demonstrate positively that the cure is a permanent one.

Three of the cases are described by Doctor Barrett in detail. In all of these the patient's gums, following treatment, were left in an apparently normal, healthy condition.

This method of treatment is so simple and so easily applied, and it promises so much for the relief of persons suffering from pyorrhea, that we hope it will be given an exceedingly careful trial by the many thousand readers of CLINICAL MEDICINE who have an opportunity to see cases of this character.

There is not a single community in which there cannot be found numerous persons suffering from pyorrhea alveolaris. While these patients usually go to the dentist (and should do so), there is no reason why the

family physician should not give this promising method a trial, if he desires to do so. The ordinary 1-2-grain ampules of emetine hydrochloride, containing 1 Cc. of liquid, are very convenient for making these applications. The contents, however, should be diluted by the addition of 5 parts of distilled water, in order to have the 1-2-percent strength solution advised by Doctor Barrett. We hope that many of our readers will give this method of treatment a good trial and report results.

WRIGHT'S SOLUTION AS A SUBSTITUTE FOR ANTISEPTIC SOLUTIONS

The use of powerful antiseptics, such as bichloride of mercury, seems to be going out of fashion. Phenol, the mercury salts, and other powerful chemicals of this kind are irritating to the tissues, sometimes destructive, and produce conditions unfavorable to rapid wound recovery, besides being attended by complications resulting from absorption, as also the not inconsiderable danger of their being swallowed, by mistake, for other less harmful substances.

G. K. Dickinson, in *The Medical Record* (June 20, p. 1124), is inclined to reject all these powerful antiseptics, substituting therefore some harmless agent. For the last two years he has employed exclusively, in the treatment of wounds, Sir Almroth Wright's citrated isotonic solution, the formula of which is as follows:

Sodium citrate	Gm.	0.5
Sodium chloride	Gm.	3.0
Distilled water	Gm.	100.0

Doctor Dickinson declares that in the thirty-seven years in which he has been doing surgical work he has never seen such prompt wound recovery as follows the proper application of this solution. The sodium chloride in this solution produces a mild hyperemia, favoring rapid repair, while the citrate of sodium keeps the wound free from deposits, allowing of the permeation of nature's healing serum. The accumulation of dead leukocytes and decomposing serum, which serves as a culture-medium for microbes of all kinds, is liquefied and quickly removed. Thus, the wound is kept clean, granulation takes place rapidly and small sloughs of all kinds separate without delay.

The Wright solution is applied on gauze, which must be kept constantly wet with it in order to obtain the best results.

Doctor Dickinson asserts that the Wright solution is of great value in the treatment of boils and carbuncles. For instance, a huge carbuncle on the neck was incised, then dressed with gauze which was kept very wet with the Wright solution, the dressing being changed frequently. Improvement was much more rapid than ordinarily occurs.

The same solution is used in the treatment of erysipelas and lymphangitis; it may also be employed as an irrigant (at a temperature of 110° F. or more) in the treatment of vaginitis, septic endometritis, and in infected wounds following gall-bladder surgery.

Dickinson is of the opinion that the sooner the profession relegates the chemical antiseptics to the background and follows out the ideas promulgated by Wright, the more sensible and the more successful the future treatment of surgical cases will become.

BOLDO: A NEGLECTED REMEDY

That we have in the South American plant boldo a remedy of exceeding value, and one that is not used nearly enough, is brought out with clearness in an article by Dr. Lucien Mayet in *La Province Medicale* for July 18 (p. 316). This drug consists of the leaves of boldoa fragrans (or peumus boldo, as it is sometimes called), a little tree (from 10 to 20 feet in height) which is very common in Bolivian and other South American forests. In Chili, the infusion of the leaves is regarded as useful, having digestive, carminative, and diaphoretic properties, while it is considered peculiarly efficacious in the treatment of hepatic disorders.

Boldo leaves contain about 2 percent of a volatile oil, a glucoside known as boldo-glucin, and an alkaloid, boldine, upon which latter its therapeutic virtues principally depend. However, it may be added that boldo-glucin is believed to possess narcotic properties, while the boldo-oil has recently been demonstrated to be of value as a vermifuge.

Of special interest, however, is the alkaloid boldine, which is a white powder of very bitter taste, slightly soluble in water and very soluble in alcohol and ether. According to Mayet, this alkaloid has a decided stimulant action upon the hepatic function, and is indicated in the treatment of all chronic infections of the biliary tract, in intestinal indigestion due to hepatic insufficiency, in hepatic congestion, and in cholelithiasis.

Doctor Mayet says that the action of boldine is not immediate, and in order to obtain lasting therapeutic effects it is necessary to take this remedy continuously for a

considerable period. There seems to be little doubt that boldine is one of the most valuable remedies for diseases of this type at present at our command, and it seems unfortunate that physicians generally are not more familiar with its properties and do not resort to it more frequently.

FORMULA FOR FRIEDENTHAL'S MOTHER-MILK SUBSTITUTE

According to Leo Langstein, of the Kaiserin Augusta Victoria-Haus, Berlin (the institute for combating infant mortality in the German Empire), Friedenthal must be awarded the credit of having practically solved the problem of devising a lacteal mixture theoretically approaching in composition as nearly as possible human milk. The main objection that can be raised against it is its relative costliness; nevertheless, Friedenthal has pointed the way along which to proceed further. We quote the formula as printed in the *Therapeutische Monatshefte*, No. 7, page 483, as follows:

Skim-milk	Cc. 330.0
Water	Cc. 660.0
Milk-sugar	Gm. 58.0
"Compound dairy salt"	Gm. 1.8

(The "dairy salt"—known as "molkereizusatzsalz"—has this composition: potassium chloride, Gm. 2; dipotassium phosphate, Gm. 1; monopotassium phosphate, Gm. 1.)

When the sugar and salt are dissolved, pass the mixture through a centrifuge three times in succession. Then add to it sterilized heavy cream in such proportion that the finished product will contain 4.5 percent of pure milk-fat. Then set aside in a refrigerator. It may be pasteurized, if to be kept for any length of time.

For use, this milk is not to be boiled or to receive any additions, but is warmed to 40° C. before being fed to the babe. The taste is agreeable and as a rule infants take it readily.

FACTS AS TO FRIEDENTHAL'S MOTHER-MILK SUBSTITUTE

Friedenthal's mother-milk substitute (composition of which is described in the preceding abstract) is fully discussed (*Ther. Monatsh.*, July, p. 480) by Leo Langstein, of the staff of the Berlin Institute for the Prevention of Infant Mortality in Germany. Comparative experiments on a large scale proved this milk-mixture as superior, on the whole, to the more popular milk substitutes; at any rate, in the case of prematurely born infants, including such as weighed less than 1500 Grams, down to as low as 1000 Grams.

The general condition of the feedlings was good; at least nothing untoward developed, any casual complication being of an infectious nature. Nevertheless, after a while irritation of the gastrointestinal tract is likely to make its appearance, when the stools are lienteric; but this need not perturb one. Doctor Bahrdt, who has been in charge of this work, holds this mixture as far better than milk for healthy infants deprived of the breast, as well as for those convalescent, weakly or exposed to infections.

The outstanding feature of this preparation is that it supplies to the child the same amount of fat and as much as it gets in breast-milk. This seems anomalous, for, both of these nutrients really are taboo, as primarily responsible for nearly all acute digestive disturbances in children. However, it is anomalous merely in appearance.

For a long time Langstein—so he declares—has been protesting against the prevalent practice of picking out one component of an article of food and then discussing its virtues or harmfulness as an agent in artificial infant feeding. This is wrong; for, a given compound food must be considered as a whole, enquiring as to the correlation subsisting between the individual nutrients and between the salts and the nutrients. And it is this happy correlation that renders it so useful. It is exactly the peculiar composition of the whey that explains the digestibility of such large amounts of fat as well as sugar.

RELATION BETWEEN IMMUNITY AND DIET OF CHILDREN

As a result of modern research, medical effort now is directed toward augmenting immunity through regulated diet; particularly in the case of infants, whose chief enemy now is known to be bacterial invasion. With this fact in mind, the experiments of Weigert were repeated by Hornemann and Thomas at the Augusta Victoria-Haus (Berlin), and Leo Langstein—the director—refers to their observations in the *Therapeutische Monatshefte* for July.

Pigs of the same litter were placed upon a standard fattening diet, augmented by a percentage either of carbohydrates, fat or proteids, respectively; simultaneously they were infected with tubercle bacilli. The eventual microscopical examination of their carcasses revealed a startling condition; namely: Those animals that were on the carbohydrate

diet were the most thoroughly infected; those on the fat diet were infected in a less degree, but, still, considerably so; while those on the proteid diet showed a low grade of infection.

This, according to the author, only corroborates clinical experience, in demonstrating the peculiar importance of a diet rich in albumin as a prophylactic against tuberculosis, as well as for preventing its progress in an affected person. The reason for this as yet is obscure, but Langstein hopes that his continued experiments may throw light upon this problem.

THE NOURISHMENT OF INFANTS IN GASTROINTESTINAL DISTURBANCES: LAROSAN-MILK

For several years albumin-milk has been the favorite in the dietetic management of gastrointestinal disorders of infants, according to Leo Langstein (*Ther. Monatsh.*, July, p. 480); who, moreover, considers the original Finkelstein-Meyer preparation vastly superior to all other similar ones. For various reasons, however, Langstein is inclined now to confine its use to the more serious cases of infantile diarrhea, in all others giving preference to larosan-milk; the latter, for one thing, being more convenient to get ready.

When fed larosan-milk, the author asserts, infants suffering from diarrheas of mild or moderate degree are quickly cured and gain in health and weight. Besides, this regimen may be continued for many weeks without giving rise to loss of appetite or other complications.

However, not alone is this preparation of service in the zymotic disturbances of digestions, but it is advantageous to add it to the regular nourishment of those normally breast-fed infants who have diarrhea from no assignable cause. Here, it is asserted to be superior to plasmon and nutrose, as well as to food containing an addition of calcium. When properly prepared, larosan-milk has the same composition as the albumin-milk.

VACCINE THERAPY OF TYPHOID FEVER

While the voice of the profession is unanimous in declaring prophylactic vaccination against typhoid fever of great value, it is by no means so decided in regard to the value of the bacterin treatment of the disease when once it is under way.

Albert A. Horner (*Boston Med. a. Surg. Jour.*, June 25, p. 986) has made a study of 135 cases of typhoid fever, comparing 40 cases in which the bacterins were not employed with 95 cases in which they were. These patients were all treated in the service of the Boston City Hospital.

It was found by Doctor Horner that the average duration of the fever in uncomplicated cases treated with bacterins was 24.39 days, while in uncomplicated cases in which vaccines were not employed it was 23.08 days. Inoculated patients presented 55 percent of complications; the noninoculated, 50.5 percent. The mortality among the vaccinated patients was 10 percent; in the unvaccinated, 11 1-2 percent.

Without going into all the details given by Doctor Horner, we may say that the evidence which he submits is not conclusive. In the patients whom he treated, the use of bacterins did not seem to modify greatly the course of the disease; but this may be owing to defects in his technic, as he himself seems willing to admit, since he reports the experience of Meakins, of the Royal Victoria Hospital at Montreal, who obtained most excellent results with vaccines, both the death rate and incidence of relapses being reduced, as compared with the cases in the same hospital not so treated.

The exact value of bacterins in the treatment of typhoid fever has not as yet been determined. The reports of different physicians are extremely at variance. On the whole, we certainly do recommend their use as likely to do good, and not likely to do harm. However, our real dependence should still be: proper feeding, correct nursing, and the intelligent and faithful administration of the intestinal antiseptics.

LOCAL ALCOHOL INJECTIONS IN COCCYGODYNIA

At the meeting of the American Proctologic Society held at Atlantic City in June, Dr. Frank C. Yeomans, of New York, read a paper in which he presented a new method of treating coccygodynia, which he confidently predicts will render this painful and intractable condition quite readily amenable to treatment.

The method recommended is based upon the suggestion made by Schlosser, in 1907, for the treatment of trifacial neuralgia and other sensory-nerve ailments, and consists in the injection of 70- to 80-percent alcohol. The technic is simple, and the operation can

be performed in the physician's office, without anesthesia, although under strict aseptic precautions.

The bowels having been emptied thoroughly, the patient is placed upon the table in the Sims' position, and the area of the skin over the coccyx painted with tincture of iodine. A 2-Cc. Luer or similar syringe, provided with a 2-inch needle, is filled with 80-percent alcohol.

The right index-finger is now inserted into the rectum and the point of maximum tenderness is determined by pressure with the finger on the inside and by counter pressure with the thumb on the outside. When the point of greatest tenderness is determined, the needle is introduced through the midline direct to the painful spot, and 10 to 20 minims of the alcohol are injected slowly. The finger is kept in the rectum as a guide and to guard against puncture. After the injection the needle is withdrawn and the point of puncture sealed with collodion.

The pain of injection lasts a few minutes, followed by a dull ache, which may last a day or two. Three to five injections usually are required, made at intervals of about one week.

Doctor Yeomans reports seven cases of coccygodynia, all occurring in women, which were treated in this manner. Four or five injections were given to these patients at weekly intervals. Relief was prompt and complete, and all the patients have remained well thereafter.

EFFICIENT VACCINATION

"The manner of combating opposition to vaccination," says Dr. Edmond F. Cody (*Boston Med. a. Surg. Jour.*, Mar. 12), "is, to vaccinate well." Accordingly he devotes considerable attention to a study of the technic of various sanitary authorities.

Essential to an understanding of the proper technic is the mental picture of typical vaccinia. This, Doctor Cody says, usually appears about as follows. In people previously unvaccinated, the eruption begins as a papule seventy-two hours after inoculation; on the fifth day it is a well-developed vesicle; on the seventh day, the vesicle has reached maturity, when it is flat, umbilicated, and surrounded by a rose-red areola. At this stage, it is, to quote Jenner, "exactly like a section of a pearl on a rose-leaf." The vesicle begins to crust on the eleventh day, and this crust is exfoliated from the twenty-first to the twenty-eighth day, and finally leaves an indelible characteristic scar, first red, later becoming white, sharply defined, with distinct pitting.

Now with regard to the technic: Various men were consulted, including Rosenau of Harvard, Emerson of Tufts, Love of the U. S. Army, Stokes of the U. S. Navy, Kerr of the Public Health Service, Sir William Osler, Theobald Smith, Simon Flexner, A. H. Doty, and John H. McCollom. With the exception of Doctor Doty, practically all these men recommend either two or three scarifications. Cody quotes Dr. John H. McCollom as saying: "Three reasonably good scars is a fairly sure indication of protection, but the mistake must not be made of thinking that because a person has a large scar it is an indication of a successful vaccination."

As fairly typical of the technic generally recommended, we give here that employed in the U. S. Army. It is as follows: First the area is cleaned with green soap and alcohol and then dried with cotton or gauze. Three abrasions are made, one inch apart, the instrument employed being an ivory point or a sterile scalpel. (Most of those consulted used simply a sterile needle.) The bandage consists of sterile gauze by preference. This is changed as often as necessary to keep the part clean.

Most of those consulted advised against the use of vaccination shields, preferring simply sterile gauze or bandages. Doctor Cody himself says: "I mention the shield, only to condemn it. It is bulky and invites violence. It often becomes loosened and scrapes the vesicle; it prevents radiation and produces the effects of a poultice; and among the poor it is loaned about to different children, often heavily coated with purulent secretions."

Doctor Cody further advises that the patient should be directed to return to the physician within seven days, or earlier than this should constitutional or severe local symptoms appear. At this time the dressing should be removed and the physician should look for the "section of pearl on a rose-leaf." If this is present, a bland ointment with sterile dressings is applied, and the lesion is thus cared for until it is dry. The certificate of vaccination should not be given until the typical scar is apparent.

How frequently should we revaccinate? Doctor Cody quotes the statistics of Kitasato, Lescohier, and Millard, which seem to indicate that the protection is much shorter than

most people believe to be the case. In one-half of those vaccinated, it is exhausted within five years, and in the remainder probably at the latest about the tenth year. Therefore, the inference is that every person should be revaccinated every five years, or, at the latest, every ten years.

THE DESTRUCTION OF THE FLY—A NEW AND CHEAP METHOD

To destroy the fly by "swatting" may be effective so far as the individual fly is concerned, but it does not have much effect upon the multiplication of flies. Plainly, the only remedy for this evil is to stop insect reproduction, if possible. That this can be done has been proven by Cook, Hutchison, and Scales, of the U. S. Bureau of Entomology, who have been conducting some elaborate experiments, which are reported in Bulletin No. 118 of the U. S. Department of Agriculture, just issued.

As everybody knows, the fly breeds in foul p'aces, but principally in stable-manure, the natural habitat of by far the greatest numbers of these insects. The fly is attracted to the manure, possibly by its odor, and when ready to lay its eggs crawls an inch or two beneath the surface, where it deposits the eggs. These hatch within one day. Next follows the larval, or maggot, stage, which lasts for four or five days. The larvæ migrate to the sides of the manure pile, and toward the base, feeding on the manure during their journey. They are then transformed into pupæ, which within a few days are found congregated on the outer edge of the manure, near the ground. In about ten days from the time the eggs are laid, the brood of young flies emerges from the manure pile.

What an enormous number of flies may hatch out of horse-manure is shown by Miss Sallie Lambeth, who, in *The Journal of the Missouri State Medical Association* for July, 1914, page 20, has reported some interesting investigations as to the number of larvæ and pupæ in a pound of manure. In this quantity she found the equivalent of 1200 house-flies in the developing stage.

The government experiments were all made with 8-bushel quantities of manure. Cook and his coworkers experimented both in the open air, on piles, and on screened-in cages. These experiments included not merely the determination of the effect of various insecticides upon the development of the fly, but also how the chemicals act upon the manure itself; the latter, of course, being too valuable as a fertilizer to be injured for agri cultural purposes.

The following substances were tried, but for one reason or another were found unsatisfactory: kerosene emulsion, kainite, the Isthmian-Canal-Commission larvicide, ferrous sulphate, potassium cyanide, calcium cyanamide, pyroligineous acid, sodium chloride, copper sulphate, the lime-sulphur mixture, paris-green, and ammonia gas liquor.

Of all the substances employed, by far the most effective, economical and practical was found to be borax or the analogous calcined colemanite; the latter being crude calcium borate. Both of these substances are markedly larvicidal, and in the amounts required to destroy the flies, eggs, and larvæ do no permanent harm to the manure; indeed, when added in small quantities, the borax seems to prevent "firing" of the manure and to increase the percentage of nitrites and nitrates, without interfering with the normal fermentation.

Without going into details as to the exact effect of the borax and colemanite upon the eggs and pupæ of the fly, as found in the manure which has been treated, in comparison with the manure which has not been treated, it is sufficient to say that in nearly all experiments in borax-treated manure fully 99 percent of the larvæ were destroyed Not only does borax kill the fly-maggots, but also it has a toxic effect upon the eggs, which do not hatch after contact with this chemical. The calcined colemanite, being largely insoluble, is not quite as toxic to the eggs, its poisonous action being exerted mainly upon the larvæ.

The proportion of the borax and calcined colemanite required for the effective treatment of manure is relatively small, 0.62 pound of borax and 0.75 pound of calcined colemanite being sufficient for the treatment of 8 bushels (10 cubic feet) of manure.

The borax is applied dry by means of a fine sieve, particularly around the outer edges of the manure pile. When thus powdered on, 2 or 3 gallons of water are sprinkled over the manure so treated. The calcined colemanite is used in the same manner. Each addition of fresh manure to the pile must be similarly treated.

The borax treatment may also be employed for garbage-cans or -boxes, and applied to floors and crevices in barns, stables, and markets, as well as to street sweepings. Water should be added in every instance, as for horse manure

The expense of this treatment is small. Borax can be purchased, in 100-pound lots, in Washington at from 5 to 6 cents a pound, this making the cost of the borax treatment practically but 1 cent per day per horse. If the calcined colemanite is used, and purchased in large shipments, the cost is about 2 cents per pound, so that the expense of treatment with this product is considerably less.

BENZOL IN DISEASES OF THE BLOOD

For some time the therapeutic influence of benzol, with especial reference to hemic dyscrasias, has been under investigation at the hands of European clinicians, among these Királfy and Korányi. Among the more recent reports is one from the imperial hospital at Vienna—H. Schlesinger, director—as presented, in a clinical demonstration before the Society for Inner Medicine (Vienna), by F. Tedesko (*Wien. Med. Woch.*, No. 2, 1913), for the physicians in charge of the case, viz., v. Noorden and W. Falta. [The benzol here spoken of is also known as benzene, and must not be confused with benzin or gasolin. It is also well to bear in mind the toxicity of benzol, or benzene, for the properties of which the reader is referred to recent textbooks.—ED.]

While heretofore benzol has been employed mostly industrially and in the laboratory, and in medicine has found limited application as an external and internal antiparasitic, and still less in certain pulmonary troubles, recent investigators ascribe to it a direct influence upon the hematopoietic apparatus. That is to say, benzol is claimed to affect the various blood-cells numerically as well as qualitatively.

Thus, according to Tedesko's presentation, benzol beneficially influences the generation of the erythrocytes, as was strikingly observed in a case of posthemorrhagic anemia incident to abortion. But more particularly does it act upon the luekocytes, controlling their count and improving their quality; the latter effect being equalled only by arsenic, with reference to leukemia, However, as to the red blood-corpuscles, the agent acts more intensively in their generation, as well as in their liberation (*ausschwaemmen*), at least in leukemia.

All in all, the action of benzol, it is claimed, seems to be directed to the blood-forming centers, including those (supposititious) "locks" or "gates" (*schleusen*) which control the passage of the cell-elements into the circulation. Benzol, hence, removes or overcomes derangements of the hemapoietic organs—though, whether permanently or only temporarily, remains an open question.

The case specifically under consideration is that of a woman of 53 who three years before (while previously healthy) became afflicted with enlarged glands of the neck and axillæ, followed by dropsy of the legs and abdomen. After a brief treatment she left the hospital, to resume housework, but returned August 3 of last year, exhibiting marked increase of her original conditions, besides cyanosis.

The woman was in a deplorable state. Because of the enormous ascites, the spleen could not be palpated, but the blood-count showed as follows: 975,000 erythrocytes; 120,000 leukocytes, 95 percent of which were mononuclear (among them 12 percent large lymphocytes), the other 5 percent being polymorphic neutrophile leukocytes; no narrow-elements; no nucleated red corpuscles.

At the start the patient was given, by mouth, 30 to 40 drops of benzol three times a day, which soon after was changed to a mixture of equal parts of the drug and olive oil dispensed in capsules, the full daily dose finally reaching 3 Grams. The remedy was well borne. The first effect was the increase of the leukocytes, to 160,000 (a result already observed by Korányi); but they soon diminished, so that by October 21 (after ten weeks' treatment with benzol) they numbered only 11,000. However, the relative percentage of the different leukocyte forms remained unaltered.

Very remarkable, in addition, was the excellent effect of the benzol-therapy upon the red blood-cells, these having risen from 975,000 to now 3,700,000, with an augmentation of the hemoglobin-content to 69 percent, from the original 31 percent. All clinical conditions were modified correspondingly, the general well-being showing striking improvement. By September 7 the hydroptic phenomena had disappeared and the patient was able to leave the bed without exertion.

Then, the middle of October, a complication intervened, in the form of a streptococcic purulent enlargement of the neck-glands and a general pyogenic infection; the febrile state becoming so acute that the benzol was temporarily interrupted. The course of this incident is not essential here; but eventually the festering gland (now of child-head's size) was opened and healed, after which rapid improvement set in, with resumption of the benzol-treatment.

In spite of the severe febrile complication and long-continued wound discharge, the benzol now, in the words of Dr. Tedesko, in an astonishingly short period developed truly marvelously brilliant therapeutic effects. Thus, on November 24 the blood-count demonstrated the presence of 2,350,000 red and 3750 white blood-corpuscles. The patient felt well and stronger and the wound was healing nicely. The leukocyte formula still remained unchanged; on December 9, however, the reading was: erythrocytes, 3,808,000; leukocytes, 6400; hemoglobin, 60 percent; color-index, 0.9.

As a feature of especial noteworthiness, the attending physicians look upon the alteration of the blood in its qualitative composition. Thus, while in the beginning the mononuclear cells were almost exclusively (95 percent) dominant, these elements now gradually receded; the latest count (December 17), for example, showing 3,722,000 erythrocytes and 4800 leukocytes, the latter of which consisted of mononuclear forms to the extent of 48 percent, with 10 percent lymphocytes among them. This latter result set in only three weeks after cessation of the fever and resumption of the benzol therapy—hence, a direct result, without a doubt. In this respect, Dr. Tedesko holds, benzol differs materially from the other symptomatic remedies for this disease.

However, in strong opposition to the enthusiastic advocates of this new benzol-therapy, there are those who pronounce this agent both useless and harmful; among their number being Dr. Pappenheim and Dr. J. Sohn. The latter has contributed an article to the *Wiener Klinische Wochenschrift*, being a study of the influence of benzol upon metabolism, and on leukemia specifically.

Sohn's trials were with one myeloid leukemic patient and with three nonleukemic individuals.

He administered the benzol to the amount of from 4 to 5 Grams per day, for three to five days in succession. Tests regarding the metabolism indicated: increase of neutral sulphur, in relation to the sulphates, to 20 or 30 percent, from the normal 7 to 15 percent; diminution of the urea-nitrogen relatively to the total nitrogen; slight increase of ammonia; in three instances there was urinary albumin.

Since the drug may give rise to nausea, eructations, loss of appetite, even hematemesis, its use is dissuaded from, especially in larger and prolonged dosage; it being argued that the single definite action—diminution of leukocytes in anemia—does not counterbalance the disadvantages, the more so, as it seems to be more apparent than real.

Since the preceding was written a number of favorable reports on benzol have appeared, one by Dr. Frank Billings, of Chicago.

BACTERIN TREATMENT OF ACUTE RHEUMATIC ARTHRITIS

While rest in bed, restricted diet, salicylates, and local applications of (synthetic or natural) oil of wintergreen and camphorated oil (combined) are all of value in the treatment of the acute rheumatic arthritides of children, W. C. Wolverton (*Merck's Arch.*, July, p. 206) becomes particularly enthusiastic when he discusses the use of bacterins in this disease. He declares that a polyvalent stock streptococcus vaccine has given him uniformly satisfactory results, so that he has come to ook upon favorable or unfavorable reaction to this remedy in cases of this character as a "therapeutic test." Since we are not, as a rule, absolutely certain as to the exact variety of the streptococcus present in any given case, he employs a mixed bacterin containing several strains of streptococci, together with the staphylococcus aureus and albus and the pneumococcus. This mixture is the well-known van Cott bacterin.

In every case in which he has employed this mixed bacterin, there has followed marked amelioration of pain, subsidence of temperature, and resumption of joint function to a considerable extent within from three to twenty-four hours after treatment was begun. As a result of this method of treatment, his patients generally speak of a feeling of well-being, and even of stimulation.

The dose of streptococci injected varies from five million to thirty million killed organisms, according to the age of the child. It is injected with a sterile Luer, all-glass syringe, the dose being repeated in twenty-four hours. A third dose may or may not be necessary, as decided by the clinical symptoms. After improvement begins, it may be desirable to continue the treatment, making the injections at gradually lengthening intervals, these being possibly of from two to four weeks, so as to maintain the immunizing power of the organism at as high a stage as possible, in order to guard against recurrences of the disease and if possible establish lasting immunity.

Miscellaneous Articles

London Meeting of the Clinical Congress of Surgeons of North America

By Our London Correspondent

WHEN Alexander the Great had subjugated to himself all the then known world, we are told that he sighed for yet more worlds to conquer. The Clinical Congress of Surgeons of North America, having exhausted the clinical resources of the United States, as exemplified in New York, Philadelphia and Chicago, cast its eyes across the ocean and decided to seek a fresh field in Great Britain. After six months of arduous and energetic preparation, the Congress met in London on Monday, July 27, and remained in session during the entire week. Nor were its sessions a case of "science by picnic," for all official entertainments were rigorously tabooed—with the mild exceptions of a golf match and a visit to the National Gallery; and after attendance on hospital clinics from 9 in the morning to 4 or 5 in the afternoon, with Spartan heroism the members devoted the evening from 8:30 to 11 to listening to a series of well-selected and not over-crowded discussions of live topics in either general or special surgery.

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The headquarters of the Congress were at the Hotel Cecil and the Hotel Savoy, which practically adjoin one another, in the Strand, and are very centrally situated for easy access to nearly all the important general and special hospitals in London. The organization of the Congress was about as good as can be conceived. Not a thing was left to chance, and almost every eventuality was duly provided for. The credit for this belongs mostly to the secretary-general, Dr. Franklin H. Martin, of Chicago, and his energetic coadjutor, Mr. A. D. Ballou. The opening or presidential meeting was held on Monday evening, but the Congress, being out for business and not for amusement, began work by attending clinics at 9 that morning. A presidential dinner preceded the opening meeting at the Hotel Cecil, which the American Ambassador graced with his presence.

At the opening meeting, an address of welcome to the members of the Congress was delivered by Sir Rickman Godlee, president of the Royal College of Surgeons of England, who in that capacity last year acted as sponsor at the christening of the newly born American College of Surgeons. This college, as the vice president of the Congress, Dr. W. L. Rodman, of Philadelphia, pointed out in his inauguration remarks, was the logical and natural outgrowth of the Clinical Congress of Surgeons of North America. The American ambassador also welcomed his compatriot surgeons to the hospitable shores of Britain. He scored by repeating a remark made to him by a well-known British surgeon, who told him that he always advised his pupils that their surgical education was not complete until they had paid a visit to the United States and observed the work of distinguished American surgeons. Mr. Page added that, now that so many of those surgeons had come over here with a corresponding object in view, he considered that "honors were easy."

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The scientific portion of the first meeting consisted of an admirable paper by Prof. A. von Eiselsberg, of Vienna, on "The Selection of the Method of Operation in the Treatment of Gastric and Duodenal Ulcers." In brief, Prof. Eiselsberg holds that perforation into the peritoneal cavity demands immediate operation, peritoneal irrigation, closure of perforation, and in bad cases jejunostomy. In hemorrhage, operation is usually best left alone. In typical pyloric stenosis, gastroenterostomy is the operation of choice. Unilateral pylorus exclusion offers the greatest security for ulcer, especially if fresh and painful, and for stopping hemorrhage. Gastroenterostomy is not so feasible for ulcer at a

distance as at the pylorus. High hydrochloric acid values of gastric juice favor postoperative peptic ulcer (a very serious complication) and detract from the value of gastroenterostomy and exclusion.

In ulcer situated at a distance from the pylorus, as well as where there is a high hydrochloric acid value, transverse resection seems the operation of choice.

In discussing this paper, Sir Watson Cheyne made a strong plea for gastrostomy combined with infolding of the ulcer, as a method of treatment in cases of gastric ulcers, especially when unsuitable for excision through their cardiac situation, fixation to important structures, or adhesion near the pyloric end. Mr. James Sherren held that there was good ground to believe that ulcers of the stomach and duodenum were associated with, and secondary to, disease in and around other viscera, particularly the appendix. The whole abdomen should be examined at operation, and in most cases the appendix removed. The treatment consisted in infolding the ulcer, if situated (as was usual) on the anterior wall, and performing posterior jejunostomy, which operation alone so modified gastric conditions that ulcers healed and excision or partial gastrectomy was necessary only when complications arose.

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Dr. J. B. Murphy, of Chicago, took for his presidential address the subject of "The Limitations and Technic of Arthroplasty and Bone Transplantation." He contended that all the arthritides are metastatic from infections elsewhere, not metabolic; that a definite period elapses between the original infection and the appearance of the arthritides; that arthritis beginning with a chill is almost certain to result in ankylosed joints, but that ankylosis may be prevented by proper prophylactic management; or if it has occurred, a sliding, normal, motion can be reinstated by the interposition of a pedicled fascia-and-fat flap, with a reconstruction of the normal conformation of the bony portion of the joint.

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Any attempt to describe the practical operative demonstrations which formed the principal object of the Congress, must necessarily be futile. As Dr. Franklin Martin declared, "Instead of listening to papers by men who can talk, we prefer to see things done by men who can do them," and he added the assertion, which I can well believe, that "If there is anything new in London, we shall be doing it shortly in the United States." It must suffice to say that several hundred operations were performed before members of the Congress by some 260 surgeons, of whom 4 were women, at 38 general and special hospitals, and that the operations covered practically every field of surgery, general and special. They had to be seen to be appreciated, and loud and frequent were the expressions of recognition of the very high average level of the surgery witnessed.

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In addition to the operative clinics, which were divided into five groups, viz., general surgery, gynecology and obstetrics, orthopedic surgery, surgery of the nose, throa. and ear, and surgery of the eye, various special demonstrations were given. Professor Arthur Keith, of the Royal College of Surgeons, on Monday gave in its celebrated museum a demonstration on peritoneal adhesions, and on Thursday one on Hunterian specimens, illustrating the repair of bone. Demonstrations on radium and x-ray work were given at the Middlesex Hospital by Dr. Lazarus Barlow, at St. Thomas's by Mr. A. D. Reid, at St. George's by Dr. W. S. Fox and Dr. G. A. Simmons, at King's College by Dr. Robert Knox, at the London by Doctor Scott, at Great Ormond Street by Dr. Ironside Bruce, and at University College by Mr. Davies.

Mr. S. G. Shattock on Tuesday gave a demonstration at the Royal College of Surgeons, of specimens relating to tumor formation. Dr. Dudley Buxton at University College, delivered an address on the introduction of anesthesia into University College Hospital, and its influence on anesthetics in England. Doctor Emery, of King's College, demonstrated the latest injection of neosalvarsan. On Wednesday, Sir Rickman Godlee demonstrated the Hunterian and Listerian specimens at the Royal College of Surgeons. There was also a display of antique instruments and of Hunterian relics in the Museum of the London Hospital, by Mr. Howard. On Thursday, Dr. H. Sequeira, at the London Hospital, gave a demonstration of skin diseases. On Friday the Museum of the Royal College of Surgeons again provided material. Mr. Colyer showed Hunterian and other specimens in the odnotological section, and Mr. Arthur Cheatte demonstrated the relative importance of different types of temporal bone.

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The bolt from the blue which fell on Europe last week, when the Austrian ultimatum was issued to Servia, has resulted in a big war cloud which spreads over all Europe and envelops Great Britain also. With the

declaration of war by Austria against Servia on Sunday, the cloud deepened, and its effect was at once manifest on the Congress by the sudden departure of most of the Continental members to their own countries. To the American, who finds it difficult to understand the subtle intricacies and interlocking character of European policies, it was evidently hard to grasp that the seemingly well-deserved chastisement of a pesky little nuisance of a bad boy by his outraged and injured senior, should be in any danger of letting loose the fight of Armageddon. As the days passed by, however, and he began to *feel* the cloud about him, with no relief appearing in sight, some of him became nervous, which was not lessened by a few holding return bookings of later date on German steamers finding them cancelled, and by others booked to return a few weeks hence by the various Atlantic lines being reminded that the outbreak of war involving England would withdraw from passenger service for naval reserve duties many of the principal vessels that have hitherto gone the way of luxury and ease. At the moment of dispatching this letter (July 31) the war cloud is gradually settling down over the land nearer and nearer, like a blight.

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If the exigencies of things permit, I shall forward in time for the next issue a brief resume of the papers that were read at the evening sessions and of the discussions that took place thereon, with a few additional notes of happenings.

* * *

Aug. 5.—Events of the gravest character have moved rapidly since I posted my last communication on July 31. During the week of the Congress, those American physicians who were acquainted with the difficulties, the dangers, and the intricacies of European national politics began to experience considerable uneasiness concerning their situation in the event of hostilities involving Great Britain breaking out, as a consequence of the developments between Austria and Servia. The Balkan danger has loomed over the horizon of the peace of Europe as an explosive center that a spark might ignite, almost as far back as I can remember. I recall that during my many years' residence in the United States, a portion of which was spent in Chicago, I wasted much valuable time in endeavoring to explain to my American friends what a very real and imminent danger it perpetually was, however innocent it might for the time being appear, and that when the dogs of war were unloosed, their onrush would assuredly come like a bolt from the blue.

During the week of the Congress, almost up to the end, I was repeatedly struck by the apparent incapacity of a large proportion of the American physicians to grasp the terrible gravity of the situation. The general answer seemed to be, "It is too impossible—it is unthinkable." On the other hand, nearly all the Continental doctors returned abruptly home in the early part of the week.

We have had in this country very many people who, with less excuse, have entertained the same idea, forgetful of the fact that for the most part international quarrels are never dominated by reason and logic, but rather are always the result of one or other of the elemental passions, thus making the parties insusceptible or more often utterly indifferent to, reason and consequence. It was not until towards the end of the Congress, that I found that some trepidation had at last been aroused in some of my friends by the fact that their return sailings on a German liner had been suddenly cancelled and that, owing to the imminence of war, the mercantile marine sailings under the British flag, between this country and the United States, were likely to be seriously interfered with.

As you know, on Saturday, August 1, the bombshell burst by the declaration of war between Germany and Russia. The upshot has been that a considerable number of American physicians and their families who attended the Congress, are for the present unavoidably detained here, but I am glad to learn that steps are now being taken by your government for their assistance and release.

The plight of those travelers on the Continent is much worse, at present at any rate, than of those in this country, who will assuredly soon find their way home. I only hope, for the sake of my country, and in gratitude for the innumerable kindnesses I received at the hands of my medical friends in America during many years, that the members of the medical profession in London have done as much as they could, as individuals, in this time of great confusion, to allay the anxiety and to lessen the strain on their visiting confreres.

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[The story of the Congress will be continued next month. Unfortunately, our correspondent's second letter, a part of which is printed herewith, reached us too late for inclusion in its entirety. We squeeze in a few paragraphs on account of our vital interest in the war. We hope that our correspondent will keep us

fully informed concerning the situation in England.—ED.]

THE FEE-SPLITTING SURGEON

It is high time that physicians should combine to put out of business the fee-splitting surgeon. We never hear of a fee-splitting physician; they do not exist. Physicians, as a rule, are men of higher character than the surgeons and do not come under the strictures that are necessary to make men honest.

But surgeons are well known to solicit patients by paying commissions to whomsoever will turn them over to their greed for operative fees. They are denounced by the American Medical Association as the ultimate of dishonest action on the part of professional men. They secretly conspire to rob the unfortunate patient who is compelled to seek surgical service, though financially unable to bear its burdens. They assume a placid and semireligious countenance while they deliberately squeeze the dying victim of his last dollar, to divide with some weak acceptor of a portion of the fee. They are as devoid of mercy as they are free from injustice, and their souls are hardened by habitual imposition on the defenseless, until pity has no place in their hearts, no influence upon their selfish grasping. They are foes of the sick and physically unfortunate, enemies of every noble tendency of the human soul, violators of inborn natural rights, and robbers of those who stand on the brink of the grave.

How many there may be of such men we can not know; but, from the extensive agitation of fee-splitting as a bad practice, we must infer that a very large part of the surgeons of the land are guilty of this peculiarly detestable crime of this class of professional men. The rapid increase of small village hospitals, run exclusively for private gain, tends to cultivate fee-splitting as an epidemic of wide extent, and the weak character of men who gravitate into surgical channels feeds the stream of fee-splitters to a flood.

Some extraordinary means should be devised to remedy this ponderous evil. Laws have been suggested, and even tried. The state of Wisconsin now makes it a criminal offense for a surgeon to rob a man before he is dead. But laws can not be made stringent enough to catch the devil, nor complete enough to search out the clever details o all varieties of fee-splitting.

The only remedy that offers any prospect of complete success is, to take the privilege of naming the size of the fee out of the surgeon's control, and to place this process in the hands of the honest physician himself.

The family physician should safeguard the unfortunate patient and stand between him and the surgeon. He should decide just the amount that his patient properly should pay for surgical work; and from his decision there should be no appeal. In this way the great body of honest physicians of the country can crush this hydra-headed evil and thereby earn the eternal gratitude of millions yet unborn.

A. D. HARD.

Marshall, Minn.

THE BULGARIAN BACILLUS IN DIABETIC GANGRENE

Such an experience as I have had with galactenzyme ought to be published, so as to give others a chance to give the preparation a trial and see whether mine is only a coincidence or whether it would be the universal result of the therapeutic application of the Bulgarian bacillus.

A man 66 years old who had diabetes mellitus, of pancreatic origin, of several years' standing, found last fall that there developed necrosis of the metatarsal bone of one of his big toes. After the usual surgical treatment the necrotic portion of the bone exfoliated and the foot healed. This spring one after another of the bones of the second toe became necrotic and had to be removed. Gradually the process extended, until last month the metatarsal bone became involved, was denuded of its periosteum at its distal end and threatened to necrose; and in spite of local antiseptic and appropriate dietetic and constitutional treatment, the wound continued to secrete pus in abundance.

At a loss as to what to do, I began, about two weeks ago, to prescribe galactenzyme tablets, two of these to be swallowed one hour after each meal, followed by a copious draught of water. To my surprise and delight, in two days the suppuration had ceased, the bone was covered with healthy granulations, and since then has healed completely.

To be sure, whether this is a mere coincidence in this individual case or whether this result would be the rule following the use of the Bulgarian bacillus in necrosis in diabetic individuals, remains to be seen; at all events, I should much like to hear of the experience of others with this treatment. In the present ca e, the sugar still is present in the urine and

the man remains on a strict diet. However, his foot has healed up. If any of the "family" have any similar experience, it surely should be reported in these columns. For, if this simple expedient will obviate resort to operative measures in diabetic necroses or renders the necrotic conditions developing in these patients more prone to heal, it has added an extremely valuable agent to our therapeutic equipment.

CHARLES ROSEWATER.

Omaha, Nebr.

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[About a year ago Beveridge reported (in *The New York Medical Journal*) 176 cases of diabetes treated with Bulgarian bacillus tablets. Improvement was the rule, and in many instances sugar disappeared entirely from the urine. Boston has recently advocated the use of the same organism in treating diabetes and has reported some fine results. Doctor Rosewater has good backing.—ED.]

AN INTERESTING RESULT WITH NEO-SALVARSAN

Mr. M., aged 24, came to me December 12, 1913, seeking relief for a severe leg ulcer. For the past five months it had been treated by several doctors, as a varicose ulcer, with but little benefit. The granulations were large, deep-red in color, and bled readily when touched, and were slightly elevated above the skin. The surrounding zone was swollen and edematous and of a deep-purple color. The ulcers were about five inches above the external malleolous. The patient was in a desperate condition, and had lost about 25 pounds in weight. He was constipated; had marked gastrointestinal disturbance, and was very anemic (hemoglobin, 70 percent; R. B. C., 2,700,000; whites, 11,200).

The patient was put to bed, bowels were regulated, and general tonic treatment was instituted. He denied syphilis. Has a wife and two healthy children. Because of the varicosity and the characteristic ulcers, with the negative history, I treated it as a varicose ulcer; but the results were far from gratifying. I decided to try the therapeutic test, giving biniodide of mercury, 1-12 grain t. i. d., with 30 grains of potassium iodide, t. i. d. This was kept up for three weeks; but at the end of this time the leg was in worse condition than when first seen.

I was very much interested in the case and had a Wassermann test made. This proved strongly positive. Convinced that I had given the sheet-anchor, mercury and iodides, a fair trial without any benefit, I gave, on January 15, 1914, 0.6 Gram of neosalvarsan intravenously, and in three days the swelling and purple color had disappeared, the ulcers were rapidly healing. One week after the first injection, a second dose, 0.9 Gram, was given intravenously, and what the first failed to do the second dose accomplished. Today the patient is most grateful, having completely recovered and gained 13 pounds in weight.

LANNING E. LIKES.

Lamar, Colo.

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[Nevertheless, Doctor, I would put that man on mercury and keep him on it for a year or more.—ED.]

NERVOUSNESS AND NEURASTHENIA: CAUSE, SYMPTOMS AND TREATMENT

The comparison has been made, as to finance, that a millionaire may draw heavily upon his funds, yet keep a large surplus; but a man with only a hundred dollars in the bank can easily exhaust his account and it may be months or years before he will financially recuperate. And so there are millionaires of nerve-force, those who are never fatigued or feel weak, as if they could not expend all their energy, no matter, it seems, how much work they do or how many different forms of excesses they practice. On the other hand—and their numbers are daily increasing—are those who, without doing anything in particular, are unable to be physically or mentally active, and, without being absolutely sick and never perhaps in a lifetime confined to a bed a day with an acute disorder, yet, are so poverty-stricken in nerve-force that they almost continuously feel tired, worn out, and are complaining of this, that or the other disorder. The least toil, sorrow, injury, or anything out of the usual routine, even a sleepless night, may sweep away their narrow margin, leaving them in a state of nervous bankruptcy, from which they find it as difficult to rise as from financial bankruptcy, and they lead a life, if not of invalidism, at least of semi-invalidism.

Some of these symptoms of functional debility and irritability are the following: headaches; pain in the brain at back of neck; heavy feeling or pressure in the head; dizziness; noises in the ears; insomnia; tenderness of the spine; nightmares; loss of appetite; dyspepsia; nausea; costiveness; indecision; fretting over trifles; hopelessness; fear of responsibility or of being alone; fear of

contamination; convulsive movements, especially when going to sleep; feeling "all in" and exhausted, without any actual pain; cold feet and hands; chills and flashes of heat; sensitiveness to changes in weather; hypochondria; inability to sew or read for any length of time; palpitation of the heart; deficient mental control. And even this long list by no means is complete; and, in fact, an absolutely exhaustive catalog of the symptoms of the nervously deficient can not be compiled, since each case differs somewhat from every other one presenting itself.

The chief, and primary, cause of this condition has been held to be modern civilization. The secondary and tertiary causes are the extremes of climate, personal habits, mental activity, and so on; but the secondary causes are considered without power to induce it, except when being interwoven with the modern forms of civilization, its noises, stress and strain, education, and the struggle for existence and pursuit of wealth, and so on. (Dr. Geo. M. Beard, on "Nervousness and Neurasthenia: Its Causes and Consequences.")

However, if, as asserted, modern civilization, with its stress, were really the chief cause, and the others enumerated the contributing factors, it would be evident that all thus exposed would have to suffer, and those who live in the midst of this noisy, nerve-racking civilization and who work the hardest should be the first to fall by the wayside, nervously exhausted. Yet, some of these folk never know what it is to be fatigued. On the other hand, we have those who never do nor ever did much of anything and, yet, always feel tired out; and no medication, electric treatment, massage, change of climate, springs or dieting will work any benefit, except perhaps a passing amelioration. Truly, it is a wonder that there are not more nervous breakdowns from this strenuous life of civilization, for so many people with a small margin of nerve-energy are trying to keep up with the procession.

We know that the fundamental essence of life is nerve-force, and, no matter what the disease may be, the most prominent, fundamental, and most constant symptom is debility; and no complete or perfect recovery can be expected until the vital force has been increased. Therefore it follows that a lack of nerve-force, with its resultant debility, causes lessened power of resistance to disease. The natural vital forces being enfeebled and the system's reserve overdrawn, causes functional disturbances, and, if continued, must result in organic disease. A lesion always is a result, and, therefore, cannot be a cause.

Nature, with its innate power, with its tendency to preserve life, often accomplishes marvels in overcoming diseases and restoring health. But, nature itself must be helped, logically, rationally, and scientifically.

In the nervous and the neurasthenic, there certainly is a waste of nerve-force—a leak thereof, as it were. Now, where is the fault, the causation of this state of affairs? And where the remedy, and how applied?

In conceding all the causes enumerated as factors in the development of a nervous constitution, it must be stated that the main factor seems to have remained long undiscovered, and not understood even at the present day by a vast majority of medical practitioners.

The eye has long been suspected of being a principal factor, and rightly so. It has happened that by the adjustment of lenses much benefit has been wrought, which resulted in a particular branch of activity, that of the optometrist. The latter, however, through imperfect knowledge and lack of investigation in optometry and ophthalmology, is concerned solely with the fitting of glasses for the correction of subnormal vision (manifest errors of refraction). This procedure improves the vision and sometimes proves of additional benefit to the patient by reason of reduced eye-strain; but the optometrist almost invariably makes the mistake, when vision proves normal by standard test types, of fitting concave glasses, which, in fact, render vision still more acute and clear. However, eye- and nerve-strain are increased and reflexes are still more aggravated. I am not speaking of the almost universal overcorrection of myopia and the fitting of minus lenses to apparent myopics. The writer often removed glasses from patients wearing from −.50 to as high as −2.00 dioptres, who apparently needed such to maintain normal vision and, after some months' treatment, they maintained normal vision without them and with marked benefit as to the condition of the nervous system. And, further, they do not seem to have any ideas as to prism values, except erroneous ones.

It is not the manifest error of refraction that produces this nerve waste and debility. I will quote from Dr. Chalmers Prentice's book, "The Eye in Its Relation to Health:"

"There seems to be little, if anything, left to discover concerning the laws of refraction in their application to defective vision.

Helmholtz, Donders, Landolt, and many others seem to have solved nearly every problem in matters of refraction and the application of glasses for the correction of the same. Many ingenious methods have found their way into use for determining, both by objective and by subjective examinations, the artificial aids to produce the most perfect vision. The acquisitions in this field are the result of many years of careful investigation, through all of which the tacit assumption has been that, when the eye was so corrected and the function of vision at once more easily and perfectly performed, all that could be desired had been accomplished. Here is exactly where the greatest error has existed, and it has lain so deeply hidden that it is not entirely strange that it has remained so long undiscovered. What misled us to the greatest extent was, that, when the function of vision was perfectly performed, we rested in the belief that the eye was perfect; but it did not occur to us that some eyes might be using an excessive amount of nerve-impulse to bring about and sustain that perfect vision."

As stated, not the manifest error, which may be corrected with lenses, but the *eye- and nerve-strain of the latent defects* cause nervous derangement. There is a field large enough for the practitioner who equips himself with a thorough knowledge of the eye in its relation to the nervous system, in combination with his applied knowledge of dietetics and hygienics, to apply himself in the treatment of nervous disorders due to *latent* eye defects. These defects often prove of a high degree, including rectimuscular imbalances, although vision may have continued normal.

Every local disturbance has some cause back of it, and I have spoken of the origin and the prophylactic and the principal curative, or, rather, initial or first step, measures; and in cases of functional disorders without lesion of the only satisfactory treatment. For other advanced information, I direct attention to the article by Dr. T. G. Atkinson on "Therapeutics of Neurology," published in THE AMERICAN JOURNAL OF CLINICAL MEDICINE for February, 1912.

I make no claim to originality as to treatment through the visual centers, but I have verified the conclusions and experience of others by many years of experience of my own.

ADOLF TSCHUMI.

San Francisco, Calif.

[All defectives, of course, are the victims of a vicious circle—or, more correctly, of a vicious circuit. Which end of the circuit appears to us the positive, and which the negative pole, depends upon the angle from which we are viewing the subject. If we view it as scientists, concerned with the underlying origins and causes of things, we are impressed by the importance of the biologic end. From such a standpoint the defective—the neurasthenic, for instance—is born, not made. He is, in fact, himself, as a whole, a *result*, and nothing within himself can be the cause of his condition. All the detailed defects and handicaps, anatomical and functional, under which he struggles are part and parcel of the net defectiveness, which is the expression of some hereditary or developmental perversion. Viewed from this angle, the neurasthenic is more or less of a hopelessly doomed individual; and neurasthenia, with its protean manifestations, an equally unreachable condition in the individual. To correct this and that single defect is mere tinkering. The only effective remedy is the biologic, racial remedy—through the germ-plasm—to breed it out.

When, however, we cross to the other side of the stage and assume the role of clinicians, the viewpoint changes. Here we are not concerned with the race, but with the individual—the patient—and it becomes our business to save the man, as far as we can, from the disabilities with which his biology has handicapped him. From this angle, therefore, the things which to the biologist were results assume the importance of causes. His digestion, his eyesight, his sensori-motor mechanism, in short, every phase of his functional grapple with life, must be made as nearly equivalent to normal as our therapeutic resources will enable us to do. We cannot cure his defectiveness; but we must put him as nearly as possible on an equal footing, to meet the demands of life, with the man who is not defective.

In errors of refraction we have a capital exemplification of this dual angle of view. All errors of refraction are unquestionably manifestations of biologic defectiveness. As a general proposition that may be taken as axiomatic as a clinical consideration, it is equally valid, although not always quite so clear-cut. In general, hyperopia and myopia, respectively, mark the point where the individual has under- or over-stepped the line of evolutional advance. Refractional error may be the only stigma of defectiveness. It rarely is, to the keen eye of the biologist; but, for all practical purposes, it frequently is. But it is also very often a part of a general state of

biologic defectiveness—of neurasthenia, for example.

From the biologic viewpoint, therefore, errors of refraction are not the cause of neurasthenia, but a result; and they are utterly incurable, in the individual. It is impossible to make a hyperope or a myope into a norm. But from the clinical standpoint, they are an important item in the vicious circuit, and act as causes. They impair the man's fitness for his struggle for life and aggravate his troubles. Hence they call loudly for clinical help; and, fortunately, they exemplify, perhaps better than anything else, our ability to make up to the defective for his disabilities, for there is no form of functional defect that we are able to compensate so adequately and satisfactorily. This, by the way, is one of the reasons why I cannot understand the astonishing indifference of the average medical man to the work of refraction.—ED.]

VACCINATION TREATMENT FOR DEVELOPED SMALLPOX

Please allow me space for a few remarks on the subject of smallpox, I wish to go on record as advocating vaccination as one of the means *for the treatment of smallpox, after it has developed.*

We all know that vaccination is the only means we have to prevent smallpox, and, to my knowledge, no other has ever been used. I advocate the use of the vaccine virus as one of the most active therapeutic measures for the treatment of developed smallpox. We regulars can claim it as antidotal, the Homeopathists can more correctly exclaim, "Similia similibus curantur."

I have treated four cases by vaccinating after the regular stage of incubation and after several pustules had formed on the body. Three were adults, and, they were vaccinated after a few pustules had formed; the other was a child, five years old, with scattering pustules over the hands and wrists, and a few on the body, with about fifty well-developed pustules on the face, as near as I could count them.

In the cases of the adults, none or only a few pustules developed, after vaccination. In the case of the child,on the first and second day following vaccination, the pustules on the face did not seem to increase, but several were developed on the hands and wrists. On the fifth day after vaccination the pustules had cleared off wonderfully, disappearing rapidly from the face and melting off the body generally without any marked desquamation. In these cases, the site of vaccination did not show a characteristic take, i. e., going through all of the successive stages to the final formation of a scab, though a vaccine sore was produced, showing that the virus had been received into the system, and had affected it; and also that the virus of the smallpox had antagonized that of the vaccine virus—each tending to neutralize the other.

It is logical to suppose that, even without a sore forming at the site of vaccination, the virus being received and absorbed would favorably affect the system as a treatment. When a sore is formed, i. e., a partial take, I think, is positive evidence of the beneficial

Front view, case of smallpox

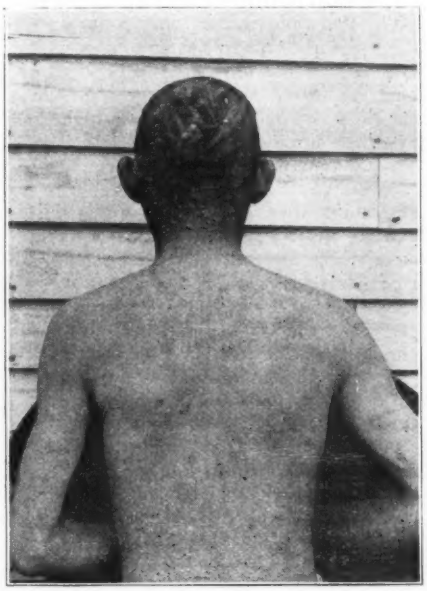
effect. Of course, a prolonged trial would be necessary to establish these findings as facts. The same general medical treatment was pushed in all of my cases, but I noticed a marked difference for the better in the patients vaccinated as above mentioned.

It is an established fact that vaccination immediately after exposure will prevent the development of the disease, the stage of incubation of the vaccine virus being shorter than that of smallpox. I am not aware of the extreme limit of time after the inception of smallpox in which vaccination will act as a preventive. I have vaccinated families after their members had been in the house for six days exposed to well developed and severe

smallpox, and this vaccination prevented the disease.

I have vaccinated people who had been vaccinated years before; a great many would take, while others failed. Some cases failed at one time, but in six months or a year afterward another trial would result in a nice take.

I send you a photograph of a very severe case of the confluent variety. This man had refused to be vaccinated to prevent having smallpox—said that he preferred smallpox. He did prefer it, till the disease was contracted—then, and then only. In this case, vaccination was not used as a treatment as in the other cases mentioned.



Rear view, case of smallpox

This brings up another question, that of compulsory vaccination. I think that our state (North Carolina) should at least insist upon the vaccination of all school-children upon their first entrance in school, and that it be repeated twice within the following ten years. And, to be just and logical, the teachers also should be vaccinated in the same way.

It is criminal to allow the little ones to be marked and pitted for life—not to mention the many dangerous and serious conditions following this loathsome disease.

It was a wise step on the part of the state board of health to remove the quarantine on smallpox. One of the many good reasons for this course was that quarantine, beside being illogical and unscientific (it being a preventable disease), was that it is a useless expense and that it offers a false security. The people expected the paternal arms of the State to protect them, and, relying upon this, the importance and necessity of vaccination was forgotten or neglected.

Just here I wish to make a plea, on account of the above-stated reasons, for the discontinuance of the unnecessary, foolish, and ridiculous practice of placarding houses where there is smallpox; unnecessary, because it does not prevent the spread of the disease. If there is smallpox, the people know it, and the matter should be left in their hands, now that the health-officer has no control; foolish, because it appears as if the health-officer were doing something, when, in fact, nothing is being accomplished; ridiculous, because the patient is allowed full liberty to mix with everybody, as suits his own sweet will; which he does at the most dangerous time, that of desquamation. So, placing the placard is a useless trouble and expense, while the health-officer is twitted by the patient: "What's the use of that, doctor, when I can go all over town if I wish to?"

The placing of a placard at all times involves the health officer in an argument, and causes discontent on the part of the family; so, while useless in itself, gives rise to friction and hard feelings. The practice lessens the influence of the health-officer and disturbs the friendly cooperation that should exist between him and the people.

C. W. HUNT

Brevard, N. C.

HUMANITY, AND TOBACCO

Humanity needs to be taught more on the direful effects of tobacco. At present we have 800,000,000 people using tobacco; which means that 800,000,000 people are subjected to the worst form of slavery, and most surely are doing the suicidal act.

Statistics show a wonderful increase of consumption and cancer since the advent of tobacco. It is high time that humanity in general be awakened to the fact that, at our present rate of going, in a few generations the earth will be depopulated once more.

The United States consumes $1,000,000,000 worth of the poison per annum. With the millions for tobacco each year, we spend a greater number of millions for alcohol in various forms, to patch up and straighten the road to destruction.

We have a hundred diseases that are caused by tobacco. And, yet, we go blindly on to the insane asylum, the murderer's cell, and the drunkard's grave. We are so degenerate that half of our offspring die before they reach the first year of age. Pitiable human failures!

In the days of highest physical perfection of Greece, Rome, and Sparta, our worst popular poisons were not known.

We have had alcoholics for 2400 years, but we knew nothing of tobacco prior to 350 years ago, and but little of it till about 250 years in the past. But for more than four-score years it has not been recognized as a positive human destroyer. Prior to the days of poison taking, we did not have paralysis, apoplexy, heart failure, and scores more of kindred evidence of poisoned nature. General paresis (destruction of vitality) has been more prevalent in the last sixty years than in all the centuries of human history.

Every one should be taught that nature's laws are God's laws, and God's laws are nature's laws, and that they are absolutely inviolate. Every violation has its penalty. A moneyed prince, or penance of any kind, cannot pay the bill. Nature's laws will never be revoked by the freaks of man.

E. NEFF.

Kimball, Neb.

[Since the writer of this comment is not a tobacco user, his opinions can not be charged with being colored by personal prejudice. The tobacco habit is not a "nice" habit; but it is not quite just to charge the "weed" with all the crimes and misdemeanors which Doctor Neff lays at its door. The fact is, that such investigations as have been made do not show tobacco to be such a terrible body poison. Used in excess it does harm, but so do many other good things—food and exercise among them. We had apoplexy, heart disease, consumption, cancer, neurasthenia and paralysis long before tobacco was brought across the ocean to Queen Bess's court. While these diseases are increasing there are many factors working in that direction—among them alcoholization, syphilization and civilization, meaning by the latter all the stresses of modern high-tension business life. General paresis is now known (thanks to Noguchi's studies) to be *always* the result of syphilis, and this disease is responsible for many ailments the causes of which are obscure to us.

Give us temperance in all things, even in our reforms! Personally I believe I am better without tobacco, and I think the same is true of most other people. Also, I believe that I am too fond of sweets. Yet I know people that seem to me to be really helped by an after-dinner cigar, just as I know people who eat too little sugar.

Doctor Neff need feel no anxiety regarding the depopulation of the earth by tobacco. A study of the history of America, of the great West, of Nebraska itself, for the last fifty tobacco-polluted years should set his anxieties at rest.—ED.]

MEDICAL PARTNERSHIP

Why don't physicians "double up" in the practice of medicine, the same as lawyers do? There's no use for physicians to be so selfish. Some are doing enough business for three men to do, by overworking—both night and day—thus curtailing the years of their usefulness. Why not join hands and mind with a brother physician and thus be able to do more and do it easier than one can do single-handed. Besides that, there is a certain amount of protection and special benefits are to be derived therefrom.

Some reasons:

1. Some offices have patients waiting for hours before being treated.

2. Some patients do not receive the time nor attention they should, and all because they patronize an overworked physician.

3. Partnerships would eliminate consultations (something undesirable), many times.

4. Physicians could step out of their office occasionally or take a needed vacation without forfeiting their patients to a waiting competitor.

5. The writer is not a socialist, but he believes in cooperation.

6. There is joy, pleasure, and profit in a medical partnership where the practice justifies it.

7. There would be more partnerships formed if it were not for selfishness among physicians and surgeons.

Who should take a partner?

1. Any doctor who has so many side lines that he neglects his practice.

2. Any young doctor doing more than he ought to be doing for the good of himself and family.

3. Any physician of any age whose health prevents him from doing all he might do.

4. Any physician of any age whose finances are such that he would like to get a little enjoyment out of life (aside from practice)

and who would be willing to share a dollar with a brother physician.

There are many other reasons why medical partnerships should be formed and cooperation exist among physicians and surgeons.

Let's hear from others on this subject.

"KIRK."

CEREBRAL ABSCESS

Here is the history of a rather unusual case which you may consider of enough interest to publish for the benefit of your readers.

In a woman of twenty-eight, married seven months, four months pregnant, an abscess formed at the root of the first bicuspid tooth of the upper maxilla. This abscess was treated three weeks after the first symptoms of pain in face and head showed, and was drained thoroughly. The tooth was then extracted and found not diseased. The pain was relieved for a few days, but returned, together with swelling of the face above the site of the former abscess. The second abscess, which pointed at the angle of the left eye, was opened and drained.

Then followed a period of two weeks when paroxysmal attacks of pain were complained of, and the patient came in to consult me. A slight swelling was seen to extend from the root of the nose upward on the forehead. Two septal abscesses were opened and freely drained. The pain ceased. The swelling externally was opened and the pus liberated; and it healed quickly. There was no vomiting, only a slight rise of temperature, pulse about 84, bowels were regular, appetite poor, no meningeal symptoms.

Two days later, being in the neighborhood, I called upon the patient. She was very sleepy, could be roused easily, but could not or would not lift a hand, her head, nor turn in bed; but uttered no word. She did not refuse nourishment, had no involuntary passages of urine or feces; simply slept quietly when undisturbed. I called the next day, and found the patient in the same condition, with pulse at 80, temperature at 99° F., pupillary reflex normal. I diagnosed cerebral abscess and advised immediate operation. The patient was brought into town the next day. The third day of the somnolent condition, and on the way to the Pocatello Hospital, a general Jacksonian seizure occurred, followed by facial convulsions at hourly intervals.

At the hospital, it was found that the right arm and leg were paralyzed. The convulsions were now coming every five minutes. The eyes were examined by an oculist. There was no pupillary reflex, pupils were not dilated, no optic neuritis; but the first stage of "choked disk," a very slight haziness of the disk, was seen.

Operation was performed at 5 p. m. The skull was opened over the left temple and pus evacuated from under the dura water. A septic condition of the left cerebral hemisphere made the prognosis serious. The convulsions ceased for six hours; pulse and temperature were normal. Then rising temperature and rapid pulse set in, and the patient died at midnight of the day after operation. Miscarriage took place four hours after the operation. The child lived six hours.

R. J. SMITH.

Bancroft, Ida.

[The moral of this case is, that any septic condition occurring upon the head or in its cavities should be watched with tireless vigilance. Pus accumulations in this locality should be evacuated promptly.—ED.]

MERCURIC-CHLORIDE POISONING: DOES SODIUM CHLORIDE HELP OR HARM?

In Doctor Carter's article on "Mercuric-Chloride Poisoning" printed in the April CLINIC, I see that in some cases he used two pints of normal salt solution subcutaneously, deep into the tissues below the breast.

After doing this very same thing in a similar case about a year and a half ago, which terminated fatally twelve days after the patient's taking 15 grains of mercuric-chloride intentionally, I have wondered whether it was good treatment or quite the opposite.

I have noticed in medical journals that some physicians think that these injections sometimes produce an irritation of the kidneys. If this is true, why wouldn't they be strongly contraindicated in bichloride poisoning, where this is always a pronounced condition?

I have successfully treated three cases of bichloride poisoning by means of gastric lavage, emetics, eggs, milk, and flour. I think the other woman (above referred to) could have been saved if treatment could have begun earlier; but she kept the fact secret for about four hours.

C. O. RICE.

Watertown, N. Y.

[We do not think that anyone any longer regards injections of normal salt solution as

injurious to the kidneys. There was some question on the point for a time, but we believe it is now pretty generally agreed that normal salt solution is highly beneficial to kidneys when they are threatened with inflammation, because of its diluent effect upon the toxins which are the cause of the inflammation. So we give it in such conditions as scarlatina, nephritis, etc. Of course, these conditions are hardly present in bichloride poisoning; but we do not think, even then, that normal salt solution would do any harm. As to whether it does any positive good—that is another question.—ED.].

CURRENT COMMENT BY A COUNTRY DOCTOR

Out in the country we meet with the same problems which confront our urban brethren. The city man has readier access to more books, if he has time to read them, and consultation also is easier to secure. However, we of the country can attend the County Society, take the journals, and, when we are right up against it, consult with ourselves. These notes, whether scientific or otherwise, are just thoughts and observations of a country doctor.

Bichloride of Mercury.—It is with pleasure that we read of Doctor Carter's treatment of corrosive-sublimate poisoning. The reasoning is based on such simple and correct principles of chemistry that it is a wonder we did not think of it ourselves. It is always thus when the other man reasons out and applies a thing. However, it is to be hoped that before long the use of mercuric chloride will have sunk so nearly into oblivion that antidotes for it will be seldom needed.

For years we have been accepting the application of synthesis of coal-tar products to the discovery of some new agent for relieving pain "without depressing the heart," with a resulting legion of such agents; agents, perhaps, sometimes used when the "indicated remedy" would have been better.

The writer fears that this has probably been the case in *isolated instances*. Now more attention is being turned to the phenol and cresylic acid group—the three isomeric cresols especially—with the result of better and less toxic antiseptics. In fact, a dilution of phenol is even now used as an index to bactericidal power of a large number of comparatively or fully harmless substances. No longer is it deemed necessary to make a routine procedure of killing off the blood stream's reparative and protective army by cell-coagulating media. True it is that some of these agents are patented, in name at least, but their formulæ are published. The patent system of rewarding research in the arts and sciences will not here be discussed, as it is one of the complex problems of society as now organized.

Advertising.—In the July number of THE AMERICAN JOURNAL OF CLINICAL MEDICINE, the editor, in mentioning the subject of advertising by doctors, says, "Don't do it." With his kind permission, I will make it a bit more emphatic. You can not afford to do it. No man nor any sophistry can justify it. The intellectual isolation resulting from such a stand is soul-stultification, if one is looking for anything but money. If money is all one wants, the prospects are that he will be disappointed. Men have made money this way, but more have lost it. This is said with the full knowledge that good men have advertised, and do so now, and that some men who profess ethics are not ethical; in fact, some are crooked. But if a competitor goes and cuts prices and even lies about you, that is no reason why you should put yourself in a position to defy the consensus of the opinion of the medical profession.

A spirit of ethics has to a certain extent ruled ever since the Hippocratic oath was taken, it being but an expression of a then age-old sentiment. My statements are made with full knowledge of the history of our art, with knowledge of sectarian squabbles, ay! in some instances of persecution, and not without study of the subject in all aspects. The only advertising that will, in the long run, pay is, to show yourself a good citizen, a positive citizen, an up to date citizen, a fearless citizen, and, within reasonable bounds, a conspicuous citizen. By conspicuous, is not meant being the recipient of a fake call from church, but being one prominent in his community by his learning, one justified in being taken by a member of the only justifiable aristocracy—the aristocracy of educated brains.

This is not written so much for the possible benefit of some man whose hair matches mine in color, but for the younger men who, ten to one, are rather hard against the proposition of establishment for their life-work. These young men will come in contact with everything, even including the "faint praise that damns." "Willie is a mighty smart boy, all he needs is experience; there is the making of a fine doctor in him." All those things are hard, very hard, but the remedy is not in going into an advertising office.

Emetine.—Long have we known the value of ipecac in dysentery, even giving it salol-coated, to enable it to reach the intestine; but, when emetine was first accepted by the leaders of medical thought and practice as "almost specific" in amebic dysentery, we feared the big dose a little. Fear has gone now. I give the hydrochloride hypodermically up to 1 grain to adults. To infants, we give the remedy per rectum, dose based upon the adult dose. Wash the bowel out, then give it combined with hydrastis, glycerin, and water, high up. Limit the use of opiates to absolutely necessary control of pain and peristalsis, until the remedy does the work.

Recently I have combined the use of emetine hydrochloride with adrenalin, to control capillary hemorrhage in minor surgery. It appears to prolong the effect of adrenalin, and seems entitled to further investigation. No originality is claimed; but the success from its use in hemorrhage of various kinds seems to justify its use in this manner.

Speaking of emetine. Soon our troubles will be added to be hematuria developing in the estivoautumnal type of malaria. Erigeron and other remedies have been helpful, but emetine seems worthy of consideration.

The "yaller chills" are not so bad in themselves, that is, the chill part. Let the patient inhale amyl nitrite or give him the *nitrite* radical in the form of glonoin, follow it up with a shot of pilocarpine, to hasten diaphoresis, unless for some cause contraindicated, then get the bowels open; calomel, podophyllin, and bilein being oftenest indicated. When secretions are established, and not before, go to quinine, remembering that the sulphate does not exhaust its possibilities. There are still the hydrobromide, valerate, ferrocyanide, and other preparations for internal use, as well as those for hypodermic administration. The action of any alkaloid differs materially according to the radical with which combined. Even if no Peruvian-bark derivative is tolerated, we still have other antimalarials, among them being salicin and arsenic, agents which should not be overlooked. The fever as such requires little attention. What is fever, and *why?* Why no fever in syphilis except through incidental complication? Why present in the period of invasion of our now acute diseases? What is the bearing of evolution and struggle for survival on this?

White's "Natural History."—Ever read White's "Natural History of Selborne"? it is a little English work, not pretentious, but accurate, and shows what one little parish had for a student whose diversion was nature. No country doctor need yearn for electric lights and pavements if he will try to read nature's pages as they unfold. Just read the serial story from the first frog-note to the close of the year. If not interested in the resident birds and the great stream of migrants going to or returning from the winter vacation, which you can not afford, then watch the green things in the hedges and beside the road, and it will not be a long and weary way.

Can you place them botanically and do you know from which medicines are derived? There is that pretty bunch of willows alongside the creek where your horse takes water; perhaps it brings to your mind that salicin is the indicated remedy in a case.

At the edge of the creek is a clump of smartweed. Ever have a case of uterine colic way out in the sticks, with nothing at hand suitable for its relief, and go find some polygonum hydropiper in a damp fence corner and, after bruising it with the flat of an ax, apply it in the form of hot compresses? If you did, you were following the pioneers of *American* medicine and doubtless did the work, although you wished for viburnum prunifolium in a modernized form. Anyway, you were thankful that your knowledge of botany saved you from giving a secretion-checking dose of morphine.

Perhaps you had the peculiar experience of having a loving and grateful parent remark: "Twelve dollars to get a man to come out here in the 'Bend' and pull weeds in a fence corner! Well! the gal done got easy, anyway." If you did, you may have had to recall a passage or two from Emerson's essays, in order to smooth your professional dignity; but, as you got your bearings by the sword and belt of Orion for the long and lonely home trail, you knew that you had practiced scientific medicine, even though you resolved next time to have saddlebags and pockets stocked with a few more readily portable active principles or concentrates.

Errors of Refraction.—If the country doctor has no trial-case, with proper knowledge of its use, he can at least have a test card in the office, and with it and a plus 0.50 lens he can detect many an error of refraction and then send his patient to someone properly equipped to correct them. Many a case of headache results from astigmatism, headaches which may have been treated as from other causes, and sometimes just "doped." Often the patient has purchased glasses at "the store," with the result to be expected.

Pituitary Extract.—Pituitary extract will stimulate involuntary muscular action when nothing else will. The stomach and colon can be handled, but the long way from the pyloric opening to the ileocecal valve often is a problem much aid to which will be gotten from a shot of the pituitary. The important field of this substance in obstetrics is not to be overlooked. However, the physician who has made a routine resort to caulophyllum, and more recently to caulophylloid, will not so often need to resort to pituitrin. While we read in the lay press, with more or less of a smile, some of the articles upon painless childbirth, we must remember that the proposition is plainly up to us. Race error of ages, usually reinforced by individual error, has caused confinement to be a horror of pain and agony to woman.

This is no reason why we should forget that the flowers and the lower animals even do not reproduce in travail and call the pain physiological. Resort to "twilight sleep," if you will; use H-M-C and a whiff of chloroform; in fact, resort to any recognized procedure, and improve on it or find a better—but, do not let those women suffer. If you do, Doctor Some-one-else will soon be the neighborhood obstetrician.

I am not here either describing or advocating his routine; all he wishes to say is that, although one possess a trained forefinger backed by all the knowledge in Lusk, Playfair, and Hirst, it is up to him to study the therapeutic aspect of parturition exhaustively. There are many men, some gray in practice, who will tell you that there should be no protracted pain in labor under any ordinary circumstances and that statement to the contrary is mere ancient didactic rot. Let us resort to the better way, and turn the very little necessary travail to joy as soon as may be, always provided that the circumstances of the mother are such that joy is possible; if not, she has trouble enough on hand without prolongation of her agony.

A. L. NOURSE.

Sawyerville, Ala.

[I am sure that every reader of CLINICAL MEDICINE will join with me in thanking Doctor Nourse for this fine article, which is filled with real helpfulness and overflows with optimism of the kind we need. I agree with everything he says. There are, however, a few points which I wish to emphasize.

For instance, I am glad that Doctor Nourse spoke of emetine. New uses for this alkaloid are developing with astounding rapidity. Not only will it cure dysentery and check hemorrhage (the suggestion to use it in association with adrenalin seems worthy of being followed up), but Barrett, of Philadelphia, has found that when a 1-2-percent solution is injected into the pockets around the teeth in pyorrhea, it will relieve the condition promptly. See the abstract on page 805.

Doctor Nourse emphasizes a point that we have often made—that the treatment of malaria does not begin and end with the administration of quinine; nor is quinine sulphate the only salt of this alkaloid worth using. To open the bowels and keep them sterilized with the sulphocarbolates are very important factors in treatment. Then, try "small doses frequently repeated" of quinine ferrocyanide in some of your cases.

Every doctor ought to love nature, and there is no better book to stimulate such a love than White's "Natural History of Selborne." It is a favorite of mine. It isn't what this old worthy taught so much as his method that is most worth while. Get a copy for your leisure hours.

The suggestions regarding the management of labor are especially timely, in view of the furore in the lay magazines over the "twilight sleep." I am glad the doctor praises caulophylloid. This is, indeed, a useful remedy which is not used half enough. It is not so much a stimulant as a relaxant, aiding the dilatation of the os and thereby shortening decidedly the first stage of labor and adding to the woman's comfort. It is not a vigorous stimulant of uterine contraction, like pituitrin, which has a field of its own, with definite indications. The skilful obstetrician will use both these remedies. With all that has been said about the blessings of the "twilight sleep," as practiced in Germany, we Americans know that nothing has brought so much relief to womankind as the combination of hyoscine, morphine, and cactoid.

Give us more "comments" like these, doctor. We need this kind of talk.—ED.]

THE AMERICAN POSTURE LEAGUE

An association recently organized, and one which certainly has a most valuable mission, is the American Posture League. This organization, which owes its inception to its president, Miss Jessie H. Bancroft, assistant director of physical training in the public schools of New York City, is concerned with the sitting and standing position of children in schools and of adults in shops, offices, and elsewhere. It hopes also to effect a more

general adoption of scientific and healthful principles in seating accommodations for working-purposes and for public audience-rooms and vehicles.

This work is to be educational, technical, and legislative. Bulletins are to be issued and lantern-slides made for lecture courses. It hopes to raise at once, $5000 by membership fees. Life memberships cost $500 or more; one becomes a patron upon payment of $250, an annual donor for $100 annually, an annual member for $50 annually, a contributing member for $25, an associate for $10 and an active member for $1 annually. Those interested should address the acting treasurer, Cornelius S. Loder, 30 Church Street, New York City.

MANAGEMENT OF LABOR CASES BY A NEW METHOD

Of late we have been reading of the Freiburg (Germany) method of inducing painless childbirth, or the "twilight sleep," as it is called by those who have gone to Freiburg to have their babies delivered.

To readers of CLINICAL MEDICINE, this "new" method is not so very new, I do believe, because I, with so many others, have in our quiet way practiced it for some years by the use of the hyoscine, morphine, and cactoid compound. Of late, since the introduction of pituitrin, I have found (and doubtless others have also) that by combining the two drugs, or preparations, not only can we secure painless childbirth—or "twilight sleep"—but also a very much shorter period for the parturient patient.

When we are called to a case of labor and find the soon-to-be mother in fear and agony of pain, we do not wonder that women will travel from India, Russia, China, America, England, and, yea, far isles of the sea to this Frauenklinik at Freiburg to be delivered painlessly of their babies; nor can women be blamed for not wanting to go through this terrible ordeal of bearing babies, when we consider the horrors of death almost through which they are called to pass for man's sake. And it is not to be wondered at when we see young women and old running hither and thither to find a doctor who will rid them of this terrible ordeal as soon as they have passed one or two menstrual periods or its not having come at the expected time. They fear pregnancy; they will go through fire and water to prevent it. And who among us have not known women offer fabulous prices to produce abortions for them? As a matter of fact, one woman offered me half of her farm if I would help get her out of trouble, lest she should have another baby.

I say we cannot, in a way, blame women for this thing, unless we find a way whereby they can have their babies painlessly, just as the doctors of the university at Freiburg have done. Regardless of scripture, "In sorrow thou shalt bring forth children," the woman of today—not the lower type, but the society woman, if you please, or she who cannot or will not bear pain—has determined not to bear children, unless there is a way for her to do so without pain.

Now, while Doctors Kroenig and Gauss of Germany have become specialists in this art by the use of scopolamine, many of us have been using a similar treatment, namely, hyoscine, morphine, and cactoid. Still, while I have found that this H-M-C combination worked wonders in relieving this distress, I have felt at times the need of something else and therefore determined on a new line of treatment. And this is what I do:

Take, for instance, a case where we find our patient with beginning labor-pains and the os about the size of a 25-cent piece, and the vulva rigid. I give the woman a hypodermic injection of hyoscine, morphine, and cactoid; then, after an hour, I ask her if she remembers her pain or whether the hypodermic I gave her hurt her. If she has forgotten it, then I am quite sure she is out of her agony, although still having her contraction.

At this critical period, if the child's head has come well down but the contractions are not sufficient to expel the child, I give her a hypodermic injection of pituitrin. This in a few moments will bring delivery of the child. Then it is that I support the perineum, lest it rupture—so strong are the expulsive movements. In a number of my cases, labor has been over in from eight to fifteen minutes after the injection of the pituitrin.

If after an hour after my first injection of hyoscine, morphine, and cactoid the patient feels the pain and remembers everything that has occurred meanwhile, I give the second dose, then wait fifteen minutes or half an hour before giving the pituitrin. When this rule is followed I very seldom need to use the forceps.

If, on the other hand, I am called to a case where there are no labor-pains and the patient is simply tired of waiting, and the head is well down, I often simply give the pituitrin, and in a few moments the child is born, almost before the mother realizes any pains. But you will find that it will please

the patient most if you give the hyoscine, morphine, and cactoid and wait a time for her to rest before giving the pituitrin. Invariably patients will tell you the next day that they did not suffer as much pain as at their regular monthly periods.

If this line of treatment were more generally adopted, and the fact that women can give birth to their babies without even the fear of pain could be more generally known, I believe it would soon make a different feeling among them, and there would be less desire to rid themselves of that monster "childbirth," fewer cases of abortion, and less work for the abortionist.

God grant that the time may soon come when women shall realize their duties and position in life as the head of the nation, that our better type of women may come to the front and be willing to give to the world a better type of mankind and not leave the peopling of this globe to the women of the poorer and lower classes, who, caring very little how things go, and taking little thought about the future, become mothers of large families and at times of worthless children.

There is one other thought in regard to the use of pituitrin, namely, that it not only in most cases terminates labor so quickly, but there is very seldom need of waiting for the placenta, for it usually is expelled within a few moments after the child, and that complete.

NEWMAN H. D. COX.

Arlington, Md.

[There can be no question as to the efficiency either of hyoscine, morphine and cactoid, or of pituitrin. It is not always advisable, however, to use the latter agent, whereas in practically every delivery the sedative combination may be administered with distinct advantage both to patient and accoucheur.

It may be well to call attention here to the fact that there are two ways in which hyoscine, morphine and cactoid may be employed: (1) As a routine measure to induce the socalled "twilight sleep" during *normal* deliveries; and (2) as an anesthetic proper in cases where operative procedure renders a deeper (surgical) anesthesia essential. Naturally, the amount of drug used and the technic employed vary materially according to the purpose for which it is used.

In a certain proportion of cases, the intelligent use of pituitrin would, undoubtedly, arrest antepartum hemorrhage and obviate the necessity for version or the application of forceps, and, as Doctor Cox points out, when it becomes necessary to administer a promptly and powerfully acting oxytocic to a woman under the influence of hyoscine, morphine and cactoid compound, this agent may be used with comparative safety.

Pituitrin acts with extreme rapidity; indeed, several accoucheurs have told the writer that if they do not secure the desired result within twenty minutes they cease to expect it. It must be stated that such failure to act under apparently ideal conditions is not infrequent and has caused many men to relinquish the use of pituitrin. It must not be forgotten either that very serious conditions have presented after the administration of ordinary doses to apparently perfectly healthy women.

We are inclined, therefore, to regard this drug as an extremely useful but not indispensable addition to the obstetrician's armamentarium—as a potent agent to be used carefully when certain well-defined conditions are present and when parturition is unduly prolonged. That it may be administered under such circumstances to patients already under the influence of hyoscine, morphine and cactoid is decidedly an advantage, but to regard it as a desirable addition thereto in any or all slow deliveries is, we think, unwise.

We have much yet to learn regarding the action of pituitrin and before subjecting the system of any parturient woman to the effect of this drug plus that of hyoscine and morphine, we must, if we would keep a clear conscience, feel convinced that the end will justify the risk.

It is in ordinary accouchments that hyoscine, morphine and cactoid proves most useful. Correctly used, by an unhurried attendant, it not only dissipates fear and pain but produces conditions which favor gradual (and, therefore, natural) expulsion of the infant. The use of pituitrin under such circumstances could not be deemed desirable.

That under certain conditions hyoscine, morphine and cactoid and pituitrin can be used conjointly, Doctor Cox has clearly proven, but where the combination—or pituitrin alone—can be used to advantage occasionally, hyoscine, morphine and cactoid can—and should be—employed in *every* delivery. Sooner or later it will be so used.—ED.]

THE DOCTOR'S HORSE: HELP WANTED

Please give me, if possible, the formula of the patent medicine, used in the treatment of horses, known as "absorbine." I also should

like to have the formula for what is known as "caustic balsam," and one for a good horse liniment—one that will not take off the hair.

In order to increase the progeny of a stallion by means of artificial impregnation, what technic should be employed, when one mare is served and other mares are to be impregnated with the same seminal discharge?

I have a fine driving-horse which has the heaves. What treatment can you suggest. Is pulverized lobelia good? If so, how should it be employed, and in what dosage?

Also, my horse has a chronic cough and occasionally has a discharge from the nostrils. There seems to be irritation in the throat near the jaw-bone. Drinking seems to irritate the throat, and pressure and rubbing along this region will induce an attack of coughing. A liveryman has told me that the tonsils are affected and that counterirritation would be good. I shall appreciate any suggestions.

C. W. HUNT.

Brevard, N. C.

[Not being a veterinarian, I referred Doctor Hunt's inquiries to my friend and colleague, Dr. N. S. Mayo, secretary of the American Veterinary Medical Association, who comments as follows:

"I regret that I cannot give you the formula for Gombault's caustic balsam. It is an old counterirritant that has been on the market for many years. The formula has been printed in many journals, but I am unable to find it now.

"Absorbine is said to be composed of the oils of tansy, spearmint, and sassafras, with alcohol. It is a mild counterirritant.

"A formula for a good veterinary liniment is as follows: Strong water of ammonia, 1 part; oil of turpentine, 1 part; water, 1 part; raw linseed-oil, 4 to 6 parts. Mix and shake thoroughly. This liniment will blister if it is applied frequently, as will nearly all veterinary liniments. If a very mild action is desired, increase the proportion of linseed-oil, and apply with little friction.

"There are two methods of artificial insemination of mares to increase the progeny of a stallion. In either, the animal is first allowed to serve a mare and then the semen is collected from the cul-de-sac on the floor of the vagina, just below the opening of the os. By the first method, an impregnating syringe is used, the semen thus collected being injected into the uterus of another mare that is to be bred. This syringe can be procured from Truax, Greene & Co., Chicago, or from any other instrument dealer. The second method of impregnating consists in filling gelatin capsules with the semen collected as described. Usually a 1-dram capsule is used, this being inserted into the uterus of the mare.

"Frequently about one ounce of semen can be collected by holding a dish beneath the penis of the stallion as he withdraws after serving a mare. The vaginal method, however, is the best. The semen must be used immediately. Artificial impregnation is extensively employed by horsemen, and 70 percent of the mares so treated become pregnant.

"The best remedy for the treatment of emphysema (heaves) in horses that I have found is Abbott's emphysema compound, which is available in tablet form. It is listed on page 203 of Abbott's prices-current.

"Your friend was mistaken when he diagnosed the cough as due to abnormal tonsils. It is possible that there may be pus in the guttural pouches. If possible, have a well-qualified veterinarian examine this horse. However, if pus is the cause, it is probable that the polybacterins (equine) will give permanent relief. Some of the veterinary liniment described may also be rubbed into the throat once daily."

We hope that the information given may be of value to Doctor Hunt, and to other readers of CLINICAL MEDICINE who are interested in the ailments of the doctor's horse.—ED.]

DIONIN IN SYPHILIS OF THE EYE

The subject of this report is a boy about seven years of age. This boy has the typical Hutchinson teeth. His father's death followed syphilitic involvement of the brain. The mother is living; although she has had two abortions, shows no evidences of syphilis. Two other children are living, and in them no signs of the disease are visible. The boy in question showed no evidence of syphilis until about two months ago. The symptoms started with pain and swelling of the knees, which the mother took to be rheumatism.

I first saw the boy about a month ago, when his knees were very badly swollen and one eye was inflamed; there being much congestion and opacity of the pupil and posterior chamber. I applied to the eye a solution of zinc sulphate in rose-water, and gave a prescription for biniodide of mercury for internal use. The next day the eye was worse. Then I dusted in a little calomel, and re-

peated that the next day. Then for about a week I alternated, day by day, the zinc-sulphate lotion and the calomel. However, the eye grew worse, cloudiness increasing and keratitis and adhesions developing. I now began to realize that something more serious must be done.

Mixing equal parts of a solution of dionin and atropine, I personally instilled this into the eye three or four times twice each day, and then wound up each such treatment by applying a 10-percent solution of argyrol. Under this line of treatment, the eye remained about the same for about one week, when I noticed a change for the better. Then I left off the argyrol, for fear of some corneal opacity occurring, but have kept up the dionin treatment.

There has been a gradual, continuous improvement, with lessening of the corneal opacity. The pupil now is almost clear and all the keratitis is cleared up. I shall continue this course, although not so persistently, until the pupil is entirely clear. No adhesions remain.

As these cases are very stubborn under any form of treatment, my results in this instance will justify me in resorting to similar treatment in like cases hereafter presenting themselves.

C. M. McCuiston.

Mt. Clemens, Mich.

FISTULA IN ANO

Dr. Charles J. Drueck, in the July issue of your esteemed journal, answers Query 5993. Will you kindly permit me to give a correspondence which I had with Doctor Drueck, which appeared in the December issue (of Clinical Medicine) of the year 1906, and reads as follows:

"In the October issue of your esteemed journal, there is an article by Dr. Charles J. Drueck, on fistula in ano, of which article I wish to say that it is incomplete, since it does not mention the fact, demonstrated by me, that simple and complete rectal fistula (which is neither syphilitic nor tuberculous) can be healed promptly, completely, and permanently by means of carbonic-acid gas application. This method of treatment was first described in *The New York Medical Journal*, in January, 1903, and then in my book ("Carbonic Acid in Medicine"). Cases successfully treated were demonstrated before two New York medical societies."

Doctor Drueck did not reply, and now, after seven years, I beg again to bring this matter before the profession.

I have demonstrated and published my observation, that we can make the diagnosis, if an anorectal fistula is a complete one or not, by passing carbonic-acid gas through the external orifice.

When we inflate the rectum with the gas, very soon a pleasant sensation of warmth will be felt; and this same senastion of warmth is experienced if the fistula is a complete one and the gas passes through the sinus into the rectum. In case the fistula is a complete one and neither tuberculous nor a syphilitic affection, the diagnosis will at once be the cure; that is, in a very few sittings the fistula will completely and permanently be healed.

This method takes most thankless cases for operation from the surgeon and gives them to the general practitioner, who has no experience in operating on rectal fistula. A special advantage of this method is that, instead of causing pain, as probing does more or less, it is a rather pleasant procedure for the patient; where there has been pain the gas application will give relief.

A. Rose.

New York, N. Y.

ABDOMINAL HERNIA COMPLICATING DELIVERY. SOLIDIFIED AMNIOTIC FLUID

In looking over my memoranda of some interesting cases, I came to this one and thought it worth offering for publication. The condition may not be a rare one; still, I have read no report of a similar finding.

Being called to confine a woman whom I had never met, I found a well-developed primipara of 28 years in active labor, who had an extensive congenital ventral hernia that extended from the umbilicus almost to the pubes. She had had good health both before and during pregnancy and thought she had carried the child for ten months.

I found the os partly dilated, but there was no mucous secretion and the vagina was dry. According to her statement, there had been no previous escape of fluid. Contractions of the uterus were strong and with each pain it would force its way through the hernial opening; and even by applying a tight abdominal band and firm pressure with the hands I could not at times prevent its escape through the abdominal wall.

No progress was being made; so, knowing the child to be dead, I forcibly dilated the os, and then found that the amniotic fluid

had changed to a glue-like substance that would stretch from thumb to finger without breaking and which was very sticky.

I had given one full-strength hyoscine, morphine and cactoid tablet before dilating the os and soon afterward introduced my hand into the uterus and made a podalic version, though with considerable difficulty; much strength was required to deliver the child. The placenta was hard and remained in the molded form produced by traction through the canal. I irrigated with hot salt solution and used gauze sponges to wipe from the uterine walls as much of this sticky substance as possible. There was no hemorrhage whatever.

The lochia came on scantily and ceased after ten days. The woman made a good recovery. Afterward the hernia closed successfully, and she has had good health since, but has not become pregnant in the four years now passed. What caused the peculiar local condition?

W. F. SCHRADER.

Fort Wayne, Ind.

[Can any reader report a similar experience or offer an explanation? Apparently after the death of the fetus the liquid portion of the amniotic fluid was absorbed, leaving behind the solids in gelatinous form.—ED.]

A CASE OF ROCKY MOUNTAIN SPOTTED-FEVER

The patient in question is a man 30 years of age and weighing 190 pounds and I was called on the second day of his sickness. He had a pulse full and strong, and a temperature of 104° F., and he complained of headache. The urine was scanty, the liver was enlarged, and the patient was constipated.

First thing, I gave a large dose of a purgative, followed by the regulation intestinal antiseptics—the combined sulphocarbolates—but was surprised to find that, after the purge had worked well and the intestinal tract had been cleaned with the antiseptics, the patient's temperature continued at around 104 to 105 degrees. So, I started in with the defervescent compound (aconitine, veratrine and strychnine) and sponge-baths.

The next morning the diagnosis of Rocky Mountain spotted-fever (or tick-fever) was easy. The patient was covered with red spots about one-fourth of an inch in diameter and less than an inch apart, the entire body, from head to feet, even the palms of his hands being involved. The pulse was not as strong as at first; respiration, 50 per minute. By about the seventh day the morning temperature stood at about 104° F., and evenings around 105° to 106° F.

I kept up the intestinal antiseptics; I also pushed calcium sulphide and echinacea, while the bowels were kept open with a saline laxative. Frequent sponging with cold water and magnesium-sulphate solution helped in controlling the temperature. Other symptoms, especially wavering of the heart, were treated as indicated. (Our altitude here is 6500 feet.) The patient was delirious at times when the fever reached the highest (about the seventh day), after which it gradually fell, until on the twelfth day the temperature was normal and the spots had disappeared.

At this point the man was very weak and had lost 26 pounds in weight, and his heart was irregular. Under cardiants and general tonics, he gained rapidly. He was able to sit up on the eighteenth day and walked a little on the twenty-first. It is now six weeks, and his weight is now nearly normal; he says he never felt better in his life.

I am reporting this because I find very little about the subject in the textbooks and journals. As this disease is common in the state of Nevada, I should be glad to see reports on other cases, and the treatment followed. If others with more experience with Rocky Mountain spotted-fever than I have (this is my second case) can tell of a more effective treatment, I shall be very glad to hear about it.

E. B. TODD.

Rochester, Nev.

THE OLD DOCTOR

I have before me a poem entitled, "A Doctor of the Old School." The poet goes on to say that "his face was beloved by all," that he was "our old family doctor—everybody's friend, always ready to lend a helping hand; the rich and poor were alike to him," and so on.

Now, it does seem to me that, if the modern up to date physician would emulate the example of the doctor of the old school, it would be better for the coming generations. While it is true that we are progressing in the science of medicine, our surgeons are doing remarkable work, and our sanitarians are doing excellent work in the domain of preventive medicine, still, it seems to me the kindly feeling and associations that the old country doctor held with his patients is

lacking in this modern system or school of practitioners.

Is there not a psychological element lacking in the up to date doctor that was a predominating factor in the treatment of the old country doctor?

It is true, we can diagnose and treat diseases more scientifically than could our predecessors; but, do we educate our patients so as to enable them to readapt themselves to conditions morphologically, physiologically, and psychologically in order that they can maintain a stable existence, commensurate with a normal and healthy individual?

Did not this "old family doctor," in his friendly way, give advice that was heeded? He may not have known why he did those things, but his advice always was good. Instead of allowing the alimentary tract to be closed up, he prevented intestinal stasis and the like, by telling his patients, in a crude way perhaps, how to avoid these pernicious habits.

He came nearer practicing biochemistry and psychologic therapeutics than does our present up to date physician. Now, this word "biochemistry"—which is such a great bugbear to many "ethical" physicians of today—I believe is to become more familiar to us as we advance in scientific medicine.

We are confronted by the words, "Back to the farm," in almost every newspaper we pick up. It seems to me that we, as physicians, would do well to engrave upon our banners the watchword, "Back to fundamentals," and to travel underneath that banner.

There is no question about the fact that, if you take the psychological part of medicine away, you have taken away two-thirds of the best part there is in the healing art. The child should be so educated that it will be in perfect health. If it is deficient in any respect, correct that deficiency by replacing these tissue-salts that are deficient. This brings us to the best method of administering these salts.

I have never been much stuck upon mixtures of any kind, but occasionally combinations can be made and used advantageously. I believe the intravenous method is the best and surest way to give these tissue-remedies, because the deficiency is to be found in the blood current, and, by putting them directly into the current, a more direct and sure and prompt result is obtained.

I have been employing vaccine-therapy quite extensively and find it far superior to other remedies in many diseases. Rheumatism can be cured more often than by any other known form of treatment. But you must know how to use it, and when. Much of the discredit placed upon this form of treatment is because of the fact that the wrong vaccine is given.

This article is not written so much to discuss therapeutics, as to show up the "old doctor" in a better light than perhaps can be shown some of his successors. Who made the medical profession what it is today? Certainly not the young upstart who is trying to deprive the old fellow of the right to practice medicine. Those old fellows paved the way, and they should be honored instead of being pushed aside—and shame upon any state or the nation that deprives them of that right.

T. H. LINE.

Marquette, Neb.

ABDOMINAL TUMOR WITH LAPAROTOMY

Senorita Gertrudes Enriquez, age 36 years, virgin, had a very large abdominal tumor, so that she measured around the abdomen at the umbilicus 48 inches, and from the symphysis pubis to the sternum, 38 inches. The tumor gave rise to intense dyspnea. When I saw her on April 8, I introduced the exploring trocar, bringing out a dark, greenish fluid. My diagnosis was, ovarian cystic tumor on the right side. (This, though, was a mistake.)

Two hypodermic injections, two hours apart, of one tablet each time, hyoscine, morphine and cactoid, then 1-2 ounce of chloroform by inhalation, completed the anesthesia. Duration of the operation, fifty-five minutes.

I made an incision ten inches long, the patient being placed on her side. The cyst was opened a distance of three inches, this letting out a dark fluid measuring four gallons. There were two short pedicles, one attached to the fundus of the uterus, the other to the abdominal wall on the left side. The pedicles were secured, transfixed, interlaced, and cut, and the peritoneum sewn over the face of the stump.

Then, to my great surprise, higher up in the abdominal cavity was disclosed another large cyst, which was treated in the same manner, letting out three and one-half gallons of fluid. This also had two pedicles, one attached to the spleen and the other to the abdominal wall, but very little adhesions to the intestines. Proper toilet of the peritoneum and closure of the incision completed the opera-

tion. There followed uninterrupted healing of the wound and complete recovery, the patient leaving, cured, May 4, riding mule-back twenty-seven miles over a rough mountain-trail.

I find that, in using the hyoscine-morphine tablets in two injections, two hours apart, and one hour after the last injection, then commencing with the chloroform and operating at the same time, very little chloroform is required, and I never have had any dangerous after-effects.

In this case, not more than two ounces of blood was lost during the entire operation, aseptic surgical technic being scrupulously carried out.

W. M. STELL.

Ocampo, Chihuahua, Mexico.

CONGENITAL STENOSIS OF THE ESOPHAGUS IN A BABY

In looking over my volume 1912 of THE AMERICAN JOURNAL OF CLINICAL MEDICINE, I noticed Doctor Dodds's article on page 660, (June number), on an unusual abnormality of the esophagus in an infant. This reminds me that I also have encountered a similar case, a girl baby born February 11, 1911, to one of our missionaries.

The baby was constantly being troubled with mucus in its throat, which re-formed as fast as we cleared it out. The child, perfectly normal in every other way, was hungry and nursed all right, but after a while the milk would sort of choke it and then come back through the nose. A small catheter was introduced, but it could not pass a certain point in esophagus.

As it could not get any nourishment the child gradually wasted away and died in five or six days. No postmortem examination was performed, but, if it had been, no doubt we should have found a similar condition as that reported by Doctor Dodds.

E. C. WILFORD.

Tzeliutsing, Sez., West China.

THE ICE-BAG IN APPENDICITIS

In his "Medical Treatment of Appendicitis" appearing in CLINICAL MEDICINE for March, Dr. R. L. Vioran quotes Dieulafoy as recommending absolute rest, liquid diet, and the ice-bag, and further says, "Opium should be regarded as dangerous."

The principal point I wish to touch upon is the use of the ice-bag in appendicitis, as well as to call attention to the article by Dr. A. M. Fauntleroy, surgeon, U. S. N., in *The Medical Record* for August 3, 1912, entitled, "The Ice-bag and Appendicitis," calling it "a warning with reference to the more or less common use of the ice-bag in this condition." In this article, from which I quote the following passage, 70 operated upon were reviewed:

"The ice-bag" he writes, "had been used in about 50 per cent of all the cases prior to being sent for operation. The cases were as promptly operated upon as their condition seemed to indicate, and in cases where the ice-bag had been used, sometimes one day sometimes two days prior to operation, there was a noticeable lack of effort on the part of nature to wall off from the rest of the abdominal cavity the appendix, which was frequently very much congested, gangrenous or perforated. It was also noted in these ice-bag-cases that there was a surprisingly low white count when one took into consideration the condition found in the adbomen at the time of operation. On the other hand, in those cases in which the hot-water-bag or morphine had been used prior to operation (the ice-bag not being used at all), the white count corresponded to what one would expect from the condition encountered in the abdomen, and in the type of cases mentioned there was also a distinct walling off of the acutely inflamed or gangrenous appendix from the general peritoneal cavity, showing that nature had been able to use successfully all of her forces in localizing the process. In view of these observations, I am forced to conclude that the ice-bag is distinctly harmful in appendicitis, and should never be used."

Appendicitis is met with on board ships, where one is very much out of the reach of well-equipped hospitals or skilled assistants, so that a laparotomy is not rashly done by the ship-surgeon alone while there is any hope for the patient from medical treatment. One swallow does not make a summer nor does it quench a big thirst, but rehearsal of a few of the cases which have come under my care on ship-board will indicate the reason for my preference for the hot-water-bag over the ice-bag.

A fat man of middle age, asthmatic, was seized with severe pains in the iliac region, with subfebrile temperature and an intermittent but not much accelerated pulse. A distinctly convex tumor presented in the same region, but nearer the iliac crest, as McBurney's point; nausea was present, also Rovsing's sign and tenderness on pressure over the tumor.

The bowels were emptied by means of castor-oil and effervescent saline. Hyoscine, morphine and cactoid relieved the pain. The hot-water-bag was applied without cessation until pain and swelling had disappeared. Aconitine controlled the fever. Food was absolutely withheld while symptoms of irritation remained, water being allowed in small quantities. On the twelfth day the patient was discharged cured.

A young woman reporting exhibited unmistakable signs of appendicitis; said she had been through previous attacks. Like treatment produced like results in thirty-six hours.

One of the under-stewards, about thirty years of age and in good health, had a sudden and sharp attack, with chill, vomiting, localized tenderness, following diffused pain in the epigastrium, with Rovsing's sign present and moderately high temperature. In three days, under the foregoing line of treatment, he was able to resume duty.

I use hyoscine, morphine and cactoid in such cases when desiring to relieve pain and have no fear of masking symptoms or of causing nausea, vomiting or constipation as after morphine alone.

S. Austin Davis.

Pier 8, Brooklyn, N. Y.

REFRIGERATION WITHOUT ICE

In view of the increasing difficulty of securing sanitary water supplies and the doubly serious problem of sanitary ice, the appearance on the American market of a little refrigerating machine, suitable for the family refrigerator, is of the greatest importance. This machine is of French origin, and has been in operation in that country for something like seven years. It is arranged so that it can be applied to any refrigerator (and in the larger sizes to a series of refrigerators) and produces temperatures lower than can be secured with ice, giving a dry cold and the better sanitary conditions that go therewith. At the same time the machine makes such actual ice as is required for table use and for drinks, and holds ready for instant use enough ice to take care of special requirements, such as making ice cream, etc.

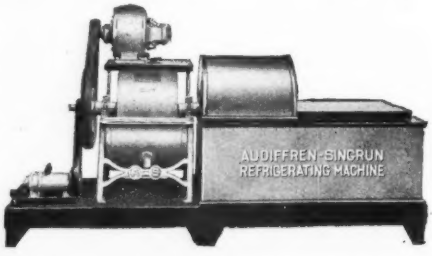
The difficulties which have up to the present time stood in the way of sanitary household refrigeration have been the complication involved in all the refrigerating machines available, and the danger involved in their complication. Most of these machines have used either ammonia or carbonic acid, both of which are subject to considerable danger of explosion from improper handling of the machine. It is a well known fact that any serious exposure to ammonia fumes is very apt to be followed by an attack of pneumonia.

The cost of operation of former machines has also been a serious handicap.

The appearance on the American market of the French machine above referred to; namely, the Audiffren-Singrun refrigerating machine, makes an advance in the art of refrigeration along very original lines.

It is the invention of the Abbe Marcel Audiffren, a professor of physics at the former Catholic College at Epinal, France. The machine is so simple that as it is arranged for use in this country it is started or stopped by a single motion. There are but two bearings to be oiled. The machine makes less noise than does the motor which drives it. There is no possibility of any explosion due to the action of the machine. As the manufacturers put it; "If the operator turns on the water and power, the machine turns on the cold."

In appearance the Audiffren-Singrun refrigerating machine is practically a large dumbbell with a pulley on the end. It consists of a shaft having a hollow drum on one end, another drum at the middle, and a pulley at the other end. The machine is carried in two bearings, the first being placed horizontally and the bearings being on each side of the drum at the middle of the shaft. When the machine is revolving in these bearings the end drum becomes cool and the drum at the middle becomes warm. Water is kept



supplied to the middle drum to keep it from becoming too warm, and the cooling effect of the end drum is used to cool brine (common salt and water) which brine is then circulated through cooling coils which may be placed wherever it is convenient.

The machine operates by causing a liquid to evaporate in the drum at the end of the shaft, drawing the gas resulting from this evaporation into the middle drum through a passage in the shaft. In this middle drum

the gas is compressed and returned to the liquid state after giving out its heat, and is then allowed to pass back to the end drum through a second passage in the shaft to be re-evaporated and repeat its cycle of operation.

The working parts of the machine are hermetically sealed within the drums and are lubricated by a bath of oil, which together with the refrigerant is charged into the machine in the factory and remains permanently.

This feature of hermetically sealing and the permanence of both the lubricant and the refrigerant is the most striking thing about this machine. There is no breaking down of the refrigerant and none can escape, so that this part of the apparatus is permanent. The oil is protected from oxidation and also from dirt, thus avoiding the two sources of deterioration of oil. Upon this fact, and upon the skilful design of the parts so that they are constantly subject to the most thorough lubrication, the life and success of the machine depend.

Those who are familiar with the laws of thermodynamics will realize at a glance that the machine automatically operates under the very best possible conditions as regards economy, whereas, in the old type of machine economy cannot be secured except by the most constant and skilful attention.

Refrigeration secured by these machines is applied to practical service by pumping the brine which has been cooled up to and through the cooling surface which may be placed in the refrigerators to be cooled. Various designs of cooling surface have been developed for use with the machine, a number of which have been developed in this country in adapting the machine to the different conditions existing here. The machine is also arranged so that it starts and stops automatically under the control of the temperatures in the refrigerator being cooled. In this way no power is wasted. When the requirement for refrigeration ceases the consumption of power and water is automatically cut off.

The ice which is made by these machines is made from the same supply from which the drinking water is drawn. As a result the ice may be placed directly in the water without any possibility of contamination and without the flat taste that distilled water ice has. This ice is invariably opaque, due to the salts and the air which all natural waters carry in solution. For almost all service, however, this opaqueness is of no importance, and when the reason for it is understood there is little objection to it.

There are in the neighborhood of a thousand of these machines in service in France and her colonies, and the American builders of the machines, the H. W. Johns-Manville Co., New York, have now several hundred in service in this country.

MEDICAL MISSIONARIES

It was Rudyard Kipling who spoke of medical missionaries and common missionaries. It is not my wish to speak ill of any missionary, but to speak well of medical missionaries. All through Palestine, Egypt, and Syria I found noble medical missionaries who had been working at their posts for ten, fifteen, twenty, thirty years.

I well remember coming into Tiberia one night, a town on the sea of Galilee six hundred feet below the level of the sea. I asked the hotel-keeper whether there was a medical man in town, and he referred me to Doctor Torrence. I found him sitting at home, looking happy with his three children, third wife and third mother-in-law sitting about. He was a Scotch doctor and had been twenty-nine years in the field at this place. He conducted a small hospital, had a native assistant, several nurses, and all the patients he could accommodate.

He entertained me kindly, and the next day he and his American wife traveled with me over to Nazareth and spent two days showing me the country. The Doctor could do this, for he had walked, ridden, and driven over every bit of this territory many a time. It was touching to see the devotion of the people of that section to their doctor.

At Nabulus, a fanatical Mohammedan town (ancient Shechem), where it is not safe for a Christian to go out alone, I found Doctor Clark working away. He had been there ever since he and I were students together at St. Bartholomew's Hospital at London.

At Assiut on the Nile, I found my old schoolmate, Dr. L. M. Henry, doing noble work, and he had been there for twenty-two years. He began practice on foot, then rode a donkey, next a horse, and now he has an automobile. It is interesting to hear him tell some of his early experiences out in the villages, where he used to call himself fortunate to find a bag of onions to sleep on—onions and bedbugs being mutually exclusive.

E. S. McKee.

Cincinnati, Ohio.

Just Among Friends

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, *A. M., M. D.*

I SHALL continue my articles upon hysteria and certain other complaints peculiar to women by describing other types of hysteria.

To the sensual type of women, voluptuousness is the aim of life and the center of her acts and thoughts. She is well endowed with guile and is extremely diplomatic. She is full of *finesse*, but not very delicate; her lack of scruple spoils her tact. She is ruseful, dissimulating, and unconsciously mendacious. She despises friendship, and needs watching. If circumstances permit, she loses all delicacy, reserve, and modesty. She is destitute of scruples. Her crimes are coolly remorseless.

The woman of the neuropathic type is one to whom the grasshopper is a burden. Her nerves are always on edge. She is a heroic invalid, who displays the air of a martyr about trivialities. This character of the hysteric recalls, as Kiernan remarks, the observation of Milne Edwards concerning the monkey-character. Levity is one of its salient features and its mobility is extreme. One can induce such a one to shift in an instant from one mood or train of ideas to another. She is now plunged into black melancholy, and in a moment may be vastly amused at some object presented to her attention. To these qualities this character owes its teasing tendencies.

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One of the mental expressions of hysteria is the tendency of the patient to accuse either herself or others of sexual immodesty. Of such frequent occurrence and so well known to physicians are such accusations that a man trained in the traditions of the medical profession is obliged to regard any confession made by a woman, as to her unchastity and implicating a physician, as being of morbid origin. The court records of all countries are blackened by cases in which physicians have been condemned innocently on the confession of hysteric women. Confession, moreover, has long been regarded by jurists as of very dubious value as an evidence of guilt.

The number of hysteric confessions is exceedingly large. In a case reported by Le Grand Du Saulle ("Les Hysteriques"), a hysteric woman caused to be sent five men to Cayenne (the French penal settlement) on a charge of rape. A member of the French Medico-Psychologic Association suspected, from an after-examination of the alleged victim, that the whole story was of hysteric origin. Through his efforts, the innocence of the convicts at Cayenne was demonstrated, and they were released from their unmerited confinement.

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Toulmouche observed the case of a young girl given to devotional exercises and much inclined to flagellation and asceticism. This young woman one day cut herself with scissors six hundred times on various parts of the body and then asserted the wounds were inflicted by a man who tried to outrage her. She finally confessed that the wounds were all self-inflicted.

Huchard had under observation an 18-year-old girl who accused the vicar of the parish of having raped her. She stated that one day, while she was praying in the church the vicar shut all the doors and requested her to go with him to the sacristy. There (she claimed) he made obscene proposals to her and, when she indignantly refused, he pointed a dagger at her; she fainted, and during the faint (she alleged) he violated her. Upon being questioned during the trial, her replies excited the suspicion of the medical expert. An examination ordered by the court revealed that she was still a virgin.

Tardieu has reported the case of an inmate of a Gascony convent, who claimed to have been made the victim of all sorts of outrages therein. Her father, with full faith in what she told, denounced the alleged criminals. Finding, however, that his daughter's story was untrue, he took his life. In another case cited by Tardieu, a girl charged two young men with having violated her and introduced into her rectum and vagina stones, splinters and iron, which had to be extracted under

great pain. She had convulsive seizures followed by paralysis. The two men were convicted, and it was not until they had been in prison for more than a year that the false nature of the accusation was discovered.

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W. A. Hammond reports ("Treatise on Insanity") the case of a 22-year-old girl, who carried on a systematic course of deception for several months, and not only greatly injured an excellent young man, but damaged her own character to such an extent that her family were compelled to move from where they lived. The patient, by wearing pads over her abdomen and gradually increasing their thickness, led to the inquiry, because of her mother's suspicion, as to whether there existed an abdominal tumor. It was decided to consult an eminent gynecologist, when the girl, in tears, lamentations, and self-reproaches, confessed that she was pregnant.

Of course, the distress of the family was very great. A great deal of anger was exhibited toward the supposed miscreant who had ruined a virtuous woman. For a long time the girl refused to name her seducer, but finally, one morning, she came downstairs with a letter which she had written to her father, in which a full (though false) revelation of all the circumstances was made. In this letter she declared that a gentleman they all knew and respected was her seducer. Arrangements for her confinement were made in a distant city. At the same time it was resolved by her parents to arrange, if possible, for a marriage with the alleged destroyer of their daughter's honor.

The father, accordingly, had an interview at which the gentleman was offered the alternative of immediate marriage or instant death. Denials and protestations were useless. He consented to a marriage, but only on condition that he should be granted an interview with the young woman in the presence of her parents. This was agreed to. A meeting took place at once and the gentleman, who was a lawyer, succeeded by his tact and the directness of his questions in exposing the fraud and obtaining a full confession.

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According to W. Goodell, the operative procedures of Sir James Simpson, which were at first so wonderfully successful in coccygodynia, owed their effects to the hysteric nature of those attacks. Strange as it may seem, the coccygeal joint is liable to serve as a barometer of a kind of mental worry. Hence, the serious surgical blunder not infrequently is made, of extirpating for sheer hysteric coccygodynia this important bone—important because of its muscular origins and insertions. Simpson has known coccygodynia to attack a lady after the death of her mother. All treatment failed, but it was finally abruptly cured by her great resentment of the second marriage of her father.

Gallstone-colic may occur in hysterics as a result of emotion, without discoverable cause in the intestinal evacuation. Kiernan has reported cases in which the colic has recurred coincident with jealousy and had disappeared upon increased attentions from her husband. As C. K. Mills has shown, many of the symptoms of appendicitis may be mimicked by hysteria. These are the cases which are so often cured by Christian scientists, Dowieites, and metaphysicians.

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Besides the limitation of the visual fields to white light, there exists at the same time decided disturbances of the color-fields, as Preston points out. There may be total loss of color perception, achromatopsia or only a disturbance of the relative position and extent of the different color-fields. The first of these conditions—achromotopsia—is not common, at least not in this country. When it exists, all objects appear of a uniform gray or sepia-color.

The second variety of color disturbance is frequently met with in hysteria. This consists of a perversion of the normal color-fields or of a reversal of the fields. In the normal eye, the fields for color are not coextensive. Thus, the larger field is for white light, then comes blue, red, and green. The smallest field is that of violet. In hysteria, these relations are altered.

In some cases there is a simple restriction of the color fields in their normal color, but nearly always there is a reversal of the field. Thus, the most frequent change is between the red and the blue. Instead of blue occupying the largest field, as it does normally, its place is taken by red. Parinaud, commenting upon the fact that in hysteria the largest color-field is that of red, is of the opinion that the well-known predilection of hysterics for red may be thus explained.

Hysteria of an epidemic type occurs among all nations and races. The epidemic type was especially common during the middle ages and very often furnished the basis for the alleged "witches'-sabbath." Usually these victims of hysteria had visual, auditory, olfactory, and general hallucinations. They had visions of lighted torches, balls of fire,

fantastic animals or imaginary personages. Sounds of blasphemies, lascivious words or horrible suggestions rung in their ears. These subjective symptoms were, as Preston remarks, accompanied by convulsions, contractures, loss of consciousness, and the like. Similar epidemics under certain conditions of excitement, religious and otherwise, occur from time to time among girls, especially in rural towns.

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Some years ago, in a small German village, two young girls awoke one morning, to find their hair had been cut close to their scalp. They related that a person had come in their room during the night and cut their hair. Several other girls subsequently experienced the same thing, and finally one young woman who was to be married the next day also lost her hair. Some of the citizens voluntereed to watch the homes of young women. These citizens received anonymous letters that their whiskers would be cut. On the door of a public building was found the following doggerel:

We are thirty,
At night we're spry,
By day from the pane we spy,
And laugh at the passersby.
Now merely the hair we clip,
Later the head off we'll snip.

It was shown later that the girls and women had cut off their own hair and also indulged in other pranks. The performers had hysteric anesthesia and convulsions.

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Hysteric convulsions usually are excited by some sudden emotion or, exceptionally, by some sudden accumulation of waste material, as in epilepsy and eclampsia. While convulsions of the emotional type are much more frequent among the lower races and the illy trained, hysteric convulsions caused by autointoxication are more frequent among the hysteric nondegenerates of the higher class.

Sometimes the motor disturbance of the convulsion is confined entirely to pantomimic expression of emotion, such as wringing the hands. As a rule there is in these conditions some muscular rigidity. To some degree the character of the patient modifies the attack. While consciousness is not lost, it is somewhat disturbed and the identity of persons around the patient is confused.

In the mild type, as Preston remarks, the limbs are under control of the patient's volition. If the patient be lying on her back on the bed or floor, she will kick her feet violently and throw her arms about in distinctly purposive manner. Quite often she will seize someone standing near. Efforts at forcible restraint will markedly increase the violence of the movements. As a rule there is no disturbance of the circulation or of respiration. The pulse is not increased more than the active exertion would warrant, and if there be no great physical effort it remains quite normal. The respiration is normal, except in certain cases of "hysteric rapid respiration," when it becomes very quick and shallow. The face is neither pale nor congested. There is a peculiar and rather characteristic quiver of the eyelids when the eyes are closed, which is of considerable diagnostic value. The pupils show no constant or characteristic change. This minor attack may last from a few minutes to several hours, and when it subsides the patient may be a little depressed or even appear quite normal.

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There are no very distinct prodromata, although the attack usually can be traced to some distinct or seemingly trivial exciting cause. The first, or epileptoid, period of the hysteric convulsion resembles grand-mal, although to this there are numerous exceptions; the patient does not bite the tongue nor in falling does she injure herself. Generally she sees and hears nothing. The eyelids oscillate slightly, but the claim that usually the patient is peeping from under her eyelids is untrue.

The first phase of the epileptoid period is one of rigidity, the arms and legs usually being extended and the hands clasping the trunk mildly opisthotonic. The breath is arrested and the pulse accelerated. Consciousness is obscured and even lost, although not to the extent as in the epileptic. Generally pressure over the ovaries or the faradic current will arrest the attack. These, however, are exceptions; for, in some hysterics, pressure on the hysterogenic zones, such as the abdomen, over the ovaries, and the inside of the thighs, may be followed by increased lethargy and unconsciousness.

Tourette reports the case of a girl who was seized by the thighs, thrown into lethargy, and thereupon violated. Mabille has met with a similar experience. Brourardel reports the case of a girl of twenty-three who, being raped during a hysteric crisis, became pregnant. Her attacks, which began at the time of her father's death, were typically hysteric, the intellectual powers being in complete abeyance. The case was abandoned by the public prosecutor.

Among the Books

JONES: "IONIC MEDICATION"

Ionic Medication: The Principles of the Method and an Account of the Clinical Results Obtained. By H. Lewis Jones, M. D., consultant to the electrical department of St. Bartholomew's Hospital, London. Second edition. Philadelphia: P. Blakiston's Sons Company. 1914. Price $1.50.

Doctor Jones is probably the greatest living authority upon the clinical aspects of ionic medication. He defines this mode of medication as the use of electric currents for their power of setting the constituents of a saline solution in orderly motion in a definite direction. This definition is sufficiently broad to embrace all the ionic actions applied in medicine; for, the tissues of the human body differ in no respect from ordinary saline solutions in their conductivity of electricity.

Most drugs are electrolytes, that is, they allow an electric current to pass through an aqueous solution, but only at the expense of their own disassociation. This is what constitutes electrolysis, or ionization; and this aspect is set forth by Doctor Jones, in his little book, in all of its clinical applications.

Ionic medication yields good results in a large range of diseases, especially that class in which there is a local perversion of metabolism, such as ulcerations, hypertrophies, sycoses, deposits, and so on. It really is a mode of therapy which deserves wider attention than it is receiving. It is not particularly difficult to handle, and in that class of conditions to which it is adapted it certainly does insure the localizing of internal medication, such as is attainable in no other way. Almost every physician nowadays has a wall-plate in his office, and can, therefore, easily equip himself for ionic treatment. Doctor Jones's little manual will give him all the instruction he will need for the procedure.

POPE: "ANATOMY AND PHYSIOLOGY FOR NURSES"

Textbook of Anatomy and Physiology for Nurses. By Amy E. Pope. With 135 illustrations. New York and London: G. P. Putnam's Sons. 1913. Price $1.75.

The reviewer's experience in teaching physiology to nurses has demonstrated to him how difficult a thing it is to determine just what portions of the subject shall be imparted to these aids of the doctor, and just how they shall be taught. Not only does one need the faculty of selection and discrimination in order successfully to accomplish the task, but also the ability to see and understand the nurse's viewpoint. The fact is, this writer has about come to the conclusion that no medical man is of himself equal to the task, unless he puts aside his assumption of superiority and permits himself to be advised and guided by some intelligent personality on the nurse's side of the fence.

By the same token, it is our conviction that no medical man can write a textbook for nurses so efficiently or so intelligently as can a nurse, provided, of course, that she have the necessary information and *mind*. And Miss Pope abundantly confirms us in our opinion. She has produced a book which is just as accurate and up to date in its contents as Howell or Kirke, and she has that angle of view which neither of those two authorities could acquire in a thousand years. It is in very fact a nurse's book; it gives anatomy and physiology as applied to nursing. The reviewer speaks whereof he knows, for he is making use of it himself in his nurses' classes. Incidentally, he is of opinion that it would form an excellent textbook for use in high schools and similar institutions.

KERLEY: "PEDIATRICS"

The Practice of Pediatrics. By Charles Gilmore Kerley, M. D., professor of diseases of children, New York Polyclinic Medical School and Hospital. With 139 illustrations. Philadelphia and London: The W. B. Saunders Company. 1914. Price, cloth, $6.00; half morocco, $7.50, net.

This is not the first book that this author has published on the subject of children and their diseases, but it is the first complete and exhaustive work that he has achieved; and it does him the highest credit. True, we have heard the adverse criticism, that the work is more voluminous and exhaustive

than the subject itself warrants; but with this we in nowise agree. Our idea of the importance of pediatrics as a special and distinct branch of medicine is that it can hardly be exaggerated.

Seldom have we seen a more carefully prepared and comprehensive treatise upon pediatrics than this of Kerley's. It is in every respect precisely what we should have expected, considering the author's character and his clinical work. If we mistake not, it will at once leap into the first place among pediatric textbooks, for it unites with its classic completeness a certain modern virility and breeziness that are lacking in the older textbooks. It is unmistakably the work of a young man—not necessarily young in years, but young in viewpoint and receptivity. Infant feeding, etiologies, prophylaxis, treatment, all are given their most modern and up to date interpretation. One splendid feature we wish specially to point out, is the hundred pages, at the close of the book, devoted to "miscellaneous subjects." These pages alone are worth the price of the book.

STELWAGON: "DISEASES OF THE SKIN"

Treatise of Diseases of the Skin. For Advanced Students and Practitioners. By Henry W. Stelwagon, M. D., Ph. D., professor of dermatology in Jefferson Medical College, Philadelphia. Seventh edition, revised. With 334 illustrations and 33 plates. Philadelphia and London: The W. B. Saunders Company. 1914. Price $6.00.

By the time that any book of the character of the one before us has passed into its seventh edition, the task of the reviewer has become a good deal of a work of supererogation, limited to the statement that "this book continues to maintain its high standard of excellence," or some such stereotyped formula. However, such formulæ, like those of daily life and conversation, admit of being uttered in two entirely different ways. They may be spoken perfunctorily and emptily, or they may be voiced in a hearty and meaning tone. It is in this latter, this genuine spirit that on this occasion of its seventh edition we cheerfully renew our compliments to Stelwagon upon this his excellent production.

Really, the revision of a book on dermatology, so as to catch up with the investigations of the past few years, virtually is equivalent to rewriting it. In this late edition, descriptions of new or recently acknowledged independent disorders appear for the first time, such as prurigo nodularis, benign sarcoid, keratosis blenorrhagica, and others; while the recent researches in syphilis, leprosy, pellagra, ringworm, and various tropical affections find a judicial representation. In short, this work continues to be what it always has been—the last word in dermatology. And this, we repeat, is no mere form of speech, but a genuine tribute to its thoroughness and excellence.

LIPPINCOTT'S "INTERNATIONAL CLINICS"

International Clinics. Edited by Henry W. Cattell, A. M., M. D. Volume I, 24th Series. Philadelphia and London: The J. B. Lippincott Company. 1914. Price $2.00.

This volume of this well-known serial, as is customary with the first volume of the year, contains a comprehensive résumé of the progress of medicine during the year 1913, a goodly proportion of which review is devoted to the sociological aspects of the profession. After this, perhaps, the most striking item is the article by Dr. Victor C. Vaughan, president-elect of the American Medical Association, advocating a plan of health insurance, based upon the frequent and thorough medical examination of all citizens. Doctor Vaughan confesses that he does not conceive that this procedure will go into immediate general operation, but he stoutly asserts that we ought to look forward to its ultimate accomplishment, and should begin to fit medical men for the work.

It must not be supposed that special mention of these two features has any invidious significance. We allude to them merely as samples of the excellent and timely things served up to the reader in the volume in question. There are at least a dozen such between its covers. If The Lippincott Company existed for no other reason than to give us this quarterly of clinical lectures and original articles, it would amply justify its existence.

KOBER AND HANSON: "ILLS OF VOCATION"

Be we financier, industrial worker, navvy, scavenger or merely a gentleman, we all suffer to a greater or less degree from the ills which our vocations or avocations engender. Just how to prevent, ameliorate or cure these but

partly understood ills, should no longer be a puzzle to the man, employer or physician, because a reliable and essentially practical book is soon to appear, under the joint editorship of Dr. George M. Kober, of Washington, and Dr. Wm. C. Hanson, of Boston. Among the contributors may be named such authorities as Sir Thomas Oliver, Legge (London), Teleky (Vienna), Devoto (Milan), Edsall (Harvard), Alice Hamilton (Chicago). P. Blakiston's Sons & Co., Philadelphia, will publish the volume.

CONDON: "A HANDFUL OF FLOWERS'

"A Handful of Flowers with a Sprig of Evergreen." By Amasa S. Condon, M. D. Boston: Sherman, French & Co. 1913. Price $1.00.

Doctors seem to take as naturally to poetry as cats to cream. Is it because the hard realities of life, which are impressed upon the men of our profession, compel the imaginative physician to turn for comfort to the land of poesy and dreams? Or is it because we see deeper into the hearts of men and women than others, and therefore know that romance is not dead? Whatever the cause we can count among our number many a physician who was also a poet. Keats was apprenticed to a surgeon and Goldsmith a qualified practitioner. Our own Holmes was an anatomist as well as the author of "The Anatomist's Hymn," and Weir Mitchell wrote even better verse than he did medical books—and the latter were classics.

In later days, who has struck a happier note than James Newton Matthews, who was "just a country doctor"? And we might sing the praises of our own George Butler—were he not still alive! However, there are precedents enough to warrant any physician with a penchant for poetry in giving his productions to the public in book form. Certainly, our good friend, Dr. Amasa S. Condon, of Ogden, Utah, is to be congratulated on the little book to which it is our privilege to call attention. His "Handful of Flowers with Sprays of Evergreen" contains only a short collection of verse, but the volume is sure to bring pleasure to its readers, among whom there should be many doctors and doctors' wives.

The writer of this review wishes he had space to quote liberally from Doctor Condon's verse than he is permitted to do; but here is a stanza from "Among My Books"—an apostrophe to "Rainy Days:"

So I say, God bless the man
That invented rainy days,
Books and pipes and hearts ablaze.
And through life's uncertain span,
Here's a heart to sing his praise.

Timely, also, is the poem on "Dog-Days," from which we quote the closing strain:

O could I dwell in some sequestered spot,
Most any place with things less blooming hot;
Say some hid-dell by sweet Contentment blest,
With books and birds and woods, nor other guest;
Say where the wimpling Weber gurgling flows
From gushing wells far sunk in glacier snows,
Or the dim aisles of sylvan Idylwild,
Where slabby rocks the mighty Zeus piles—
There woo the Summer in a boreal land
Of shrub and glebe, scathless of human hand;
And lured by the sweet symphony of streams
To dream of youth and love, O dream of dreams!

Doesn't this "taste" make you long for "more"?

HARROWER: "HORMONE THERAPY"

Practical Hormone Therapy: A Manual of Organotherapy for General Practitioners. By Henry R. Harrower, M. D. With a Foreword by Dr. Arthur Biedl, of Vienna. New York: Paul B. Hoeber. 1914. Price $4.50.

For the past ten or twenty years the tide of therapeutic thought and research has been setting steadily toward this one supreme truth, that the human body contains within itself all the necessary potentialities and agencies of defense against disease, and that the business of scientific therapy is to find ways and means of stimulating and utilizing these inherent potentialities and agencies.

One phase of this new truth was exemplified in the demonstration of the body's wonderful system of defense against microbic invasion, of which Ehrlich, with his side-chain theory, was the earliest modern exponent, and which has now developed into the very practical form of vaccine therapy. Latterly, Abderhalden and his school, and others who have been working along similar lines, have given currency to another phase of the same truth, namely, the elaboration, by the body, of principles and ferments and secretions of various kind for the regulation within itself of the functional and structural balance of the body.

To this latter phase belongs what is known as the doctrine of the hormones, which may now be regarded as having reached the stage of a practical mode of therapy at least as definite as vaccine therapy. The author of this book has, for the past five years, been

doing some very painstaking and praiseworthy work in the way of investigation, collation, and clinical experimentation in hormone therapy, and this volume represents the winnowed, sublimated fruit of his work. It is, so far as we know, the only English work which sets forth the hormone doctrine in practical, useable shape.

Like the distinguished writer of the foreword, we too are "struck with the excellent manner in which the author has succeeded in laying before his readers this new branch of therapeutics in a concise and easily understood form." While at present the application of hormone therapy necessarily is limited, it is destined to expand, and before long to become an important factor in general therapeutics. To quote Professor Biedl again: Doctor Harrower has "now placed in the hands of medical practitioners a guide which will enable them to collaborate in working out this problem, and all those concerned, whether theorists or medical practitioners, will be grateful to him for his labors."

GARDNER AND SIMONDS: PRACTICAL SANITATION

Practical Sanitation: A Handbook for Health-Officers and Practitioners of Medicine. By Fletcher Gardner, M. D., and James Persons Simonds, B. A., M. D. Illustrated. 1914. St. Louis: The C. V. Mosby Company. Price $4.00.

In the last number of *The British Medical Journal*, it was seriously suggested that the time had come when no person should be licensed to practice medicine until he had completed a course and received a diploma as doctor of public health. It is, perhaps, a little early to take such an extreme step as that; nevertheless, the fact remains that in these days the general practitioner must be much more than a mere family physician—he cannot evade a large degree of responsibility for the public health and sanitation of the district in which he lives and plies his practice.

This being so, it follows that the physician must have at hand, available for study and reference, some concise, comprehensive manual of public health and sanitation, by which to instruct and guide himself in the efficient performance of these modern duties. There are published several such manuals in England, where the public-health function of the doctor has been recognized and provided for much longer than is the case here; but in this country, so far as we know, no serious attempt has heretofore been made to furnish an authoritative, practical exposition of the subject in a single moderate-priced volume. Authors as well as publisher are to be congratulated upon having accomplished this desideratum in the book under review. They deserve our thanks. We cordially commend Messrs. Gardner and Simonds' excellent manual to our readers, and urge them to buy and to use it.

SIMON: "CLINICAL DIAGNOSIS"

A Manual of Clinical Diagnosis by Means of Laboratory Methods. By Charles E. Simon, B. A., M. D., professor of clinical pathology and experimental medicine, College of Physicians and Surgeons, Baltimore. Eighth edition, enlarged and revised. With 185 engravings and 25 plates. Philadelphia and New York: Lea & Febiger. 1914. Price $5.00.

The two years that have elapsed since the publication of the preceding edition of Simon's "Diagnosis" have brought forth a considerable amount of new matter, this necessitating careful revision and no little addition. In the present edition, the diagnostic methods based upon the appearance of the protective ferments of Abderhalden are given faithful representation. Much of the text dealing with the technic of the Wassermann reaction has been rewritten, and emphasis is laid upon the desirability of a greater uniformity in the use of the various reagents, notably of the antigen. The applicability of the complement-fixation test to latent gonococcus infections having been satisfactorily established, a description of the corresponding technic has been embodied in the present edition, and should prove useful in many cases.

The plan adopted in the previous edition, of dividing the book into two sections, the first devoted to technicalities and the second to diagnostic application, has been preserved in the present one. This is an excellent plan, in that it follows the natural and logical development of interest in the student's mind, while it leads sequentially to the clinical aspect of the subject—which is, of course, the end and purpose of the whole system.

The appearance of an eighth edition evidences that Doctor Simon's brilliant and conscientious work is appreciated by the students and practitioners of the country—by which appreciation, be it said, they do credit to themselves.

Condensed Queries Answered

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

Answers to Queries

ANSWER TO QUERY 6017.—"Masturbation By a Female Child." In my CLINIC for July, Query 6017, "Masturbation By a Female Child," interested me; however, I regret that nothing was said about diet, the use of narcotics, and other pertinent measures.

The child's urine being acid, would indicate that an excessive meat diet might be an exciting cause. Coffee, tobacco, and other narcotics I have found also to be easily removable causes.

A change of the child's diet to cereals for breakfast, vegetables for dinner and fruits for supper, with no meats or exciting condiments (spiced foods, etc.), I think would go far toward helping the girl to break the chains of that terrible habit. In addition, plenty of exercise in the open, with cheerful company of boys and girls, and studies adapted to her capacity and natural bent of mind would complete the reform. Suggestion is also good. The causes as found in the environmental intake must be found, if possible, and removed, of course.

S. J. BROWNSON.

Fort Worth, Texas.

Queries

QUERY 6028.—"Seborrhœa Oleosa." W. A. M., Michigan, writes as follows: "I observe that you lay considerable stress upon the value of staphylo-acne bacterin for acne, and as I have under treatment such a case that is bothering me, I come for advice.

"The patient, a man of forty, has been troubled since he was seventeen years of age. He always has been in good health and robust. For the first four or five years pimples covered his face, back, and chest, which came to a small head and upon pressure yielded a grub-like mass. For the last few years he has been bothered with blocking of the sebaceous glands; if these are squeezed a long worm-like substance protrudes. Occasionally there appears a red pus-filled pimple. The man's skin presents an oily appearance. He has tried, as he puts it, everything and everybody. Sometimes I think he is better, but only to have him come back after a few weeks as bad as ever. If you can suggest any literature on the subject please let me know; or, if you think bacterin will give results, explain the treatment."

We are quite sure that you will understand that in a case of this character permanent results can not be secured from the use of bacterins without the concurrent use of appropriate internal remedies. It is essential that the gross disorder of the body-chemistry be corrected. It appears to us that your patient suffers from seborrhœa oleosa, or stearrhœa simplex. On the face, the favorite site for this disease is the nose and its immediate neighborhood; not infrequently the forehead and other parts of the face are involved. The skin is shiny, and glistening and the gland-ducts are patulous. Frequently the nose is congested and of a dark red tint. Comedones and scattered acne lesions are seen, and in occasional instances the excessive secretion dries, forming thin scales of dirty-gray or brownish-gray color.

Energetic local treatment is essential, of course, and the correct constitutional remedies (the indications, naturally, varying from time to time and with each individual) given persistently. Arsenic, however, is almost invariably of service; calcium sulphide and irisoid, alternated week and week about, have served this writer effectively.

Try washing the skin with carbenzol soap and warm water, then use a 2-percent hydro-

alcoholic solution of resorcin. Should this prove too dry, add a little glycerin. Another, and very excellent, local application consists of the aqueous extract of calendula officinalis with resorcin and a soluble bismuth salt. The use of the vibrator and galvanic current frequently proves beneficial.

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QUERY 6029.—"Hypodermic Administration of Mercury." J. T. S., Georgia, desires to carry out Dr. G. Frank Lydston's treatment for syphilis recently outlined in these columns and wishes to know whether the bichloride or the salicylate of mercury in a suitable form for hypodermic use can be supplied.

It is a simple matter to prepare a solution of mercury bichloride, the following being a suitable formula: mercuric chloride, grs. 1 1-2; sodium chloride, grs. 15; sterile water, m. 1550 (or drs. 26). This must be filtered, then thoroughly boiled. From 8 to 16 minims constitutes a dose.

Hare strongly recommends the salicylate, in the form of a 20-percent suspension; as, for example: mercury salicylate, dr 1; sterile alboline, drs. 2. This should be carefully triturated; for, if comminution and mixture are not thorough, the discomfort of the patient will be markedly increased. You will find the full technic explained on page 118 of Hare's "Modern Treatment."

Hare further states that he has attempted to have this alboline suspension of mercury salicylate put up in sealed ampules; but he found the bulb so small and the amount of the material so little that it was difficult to shake up the contents and obtain a perfect emulsion. "Besides," he says, "it is a very expensive and entirely unnecessary refinement of technic." Injection is made only into the glutei, the muscle mass between the trochanteric fossa and middle line, an area with a superficies of six or four inches. The sides of the buttocks should not be used.

Guiteras has the salicylate prepared as follows: mercury salicylate, grs. 48; lanolin, dr. 1; alboline, to make oz. 1. Inject of this 10 minims (equal to 1 grain) once a week.

As you are interested in the hypodermatic use of mercury what follows will interest you, this information being part of a letter we recently wrote to another physician.

Hyrgol (colloid mercury) is administered hypodermically in an aqueous 1-percent solution; the average dose being from 1 to 2 cubic centimeters.

In *Merck's Archives* for January, 1910, Dr. Wm. F. Bernard, Chicago, instructor in genito-urinary diseases at the University of Illinois, has an article on intravenous injection of mercury. He states that he has given 9838 injections, using equally a 1-percent solution of mercuric cyanide and a 1-10-percent solution of mercuric chloride. He gives the preference to the latter.

Foreign authors state that 1 in 1000 is the maximum strength of mercuric-chloride solution; the usual dosage should seldom exceed 1-12 of a grain. Bernard, by gradually increasing the concentration, found that a 1-percent solution could be used with impunity, the maximum dose given by him being 7-10 grain, for several days in succession. Under the circumstances, we suggest that you ask Doctor Bernard for reprints of his various articles.

Besides hyrgol and the salts mentioned, the following derivatives are employed hypodermically and also intramuscularly:

Mercury aminopropionate (1-12 to 1-6 grain); mercury anilinate (intramuscularly) in 30-percent suspension in liquid petrolatum; mercury asparaginate (1-12 to 1-6 grain); mercury benzoate; mercury bichloride; carbamidated mercury (8 to 15 minims in 1-percent aqueous solution); mercury cacodylate (1-2 grain, intramuscularly); mercury cyanide (1-12 to 1-6 grain); mercury formamidate (15 minims in 1-percent solution); mercury glycocholate (8 to 15 minims in 1-percent solution); mercury iodate (1-6 to 1-4 grain, subcutaneously every two or four days); mercury lactate (15 minims of a 1-percent solution); mercury resorcinolacetate (3 minims of a solution of 85 grains of the salt in 85 grains of liquid paraffin, and 30 grains of anhydrous lanolin, twice weekly); mercury succinimide (1-5 to 1-3 grain, hypodermically); mercury thymolacetate (1 1-2 grains every three to five days in liquid paraffin or glycerin); mercury thymolnitrate (similar dose); mercury tribromphenolacetate (8 minims of a mixture of 100 grains and liquid paraffin), 4 1-2 drams once a week; mercury and potassium thiosulphate (1-6 to 1-2 grain, hypodermically).

Any good druggist will be able to prepare a suspension of mercury salicylate for you. Personally, we do not recommend this method of medication; unless extreme care is exercised, most unpleasant results may follow these injections.

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QUERY 6030.—"Basilar Meningitis." J. C. N., Tennessee, writes: "I am treating a boy five years old who six weeks ago was taken with meningitis in a mild form. After

the seventh day there developed a slow fever, obstinate constipation, and continuous severe headache, and at times he would grasp his head, front and back, and scream out, "Oh, my head." He began to complain of his bowels feeling sore, but there was (and there is) no swelling, while the tongue indicates no inflammation. For the last ten days his temperature has been normal, but the pulse runs about 120 to 130 per minute. He has now a vacant, glaring stare, seldom speaks, and before he speaks he will burst out in an idiotic laugh. His tongue has a heavy white coating that so far I have been unable to remove. He demands nothing to eat, but uncomplainingly takes what is given him.

"To keep his bowels open, I give castor-oil and sometimes a laxative saline. Besides, I have given calomel, lactic acid, podophyllin, and salol, trying to clean away the white coat on the tongue; but nothing touches it. The child is very emaciated and weak. What treatment do you suggest?"

You do not mention that you performed lumbar puncture, consequently, we are unable to decide whether you have to do with tuberculous (basilar) or epidemic cerebrospinal meningitis. The symptom-complex described, though, rather leads us to suspect the former; which, usually, is a secondary condition. Is there any tuberculosis taint in the family? Tuberculous meningitis, you know, sometimes runs a rapid course, although it may run on for two months or longer.

Fischer, in his "Diseases of Infancy," quotes the case of a child of five years, of healthy parentage. The child, well nourished, had not been ill before, except for socalled "indigestion." Returning from a visit to the country, the child, apparently in good health, both physically and mentally, went to school; when, however, it came home, it had headache, the tongue was coated, and there was a slight rise of temperature. In spite of cleaning out of the bowels and stomach, the headache persisted, the tongue refused to become clean, and the child cried and moaned and could not sleep.

Treatment for gastric catarrh was instituted; but emaciation progressed; strabismus developed, nausea and vomiting occurred; the child remained in semistupor, crying and screaming with pain. Respiration at this time was slow, and pulse small, compressible, and irregular, ranging between 100 and 160. Later, respiration became labored. Babinski's reflex was present. The spinal fluid was aspirated and examined by Doctor Billings, of the New York Health Department. The latter found tubercle bacilli and diplococci pneumoniæ. Diagnosis: tuberculous meningitis.

Always in similar cases the *tache cérebrale* and Babinski reflex should be sought for. The *tache cérebrale* is produced by drawing the finger-nail quickly over the skin, when a bright-red mark will remain for several minutes. As a rule, the child sleeps with its eyes half open. There may be unilateral flushes, also spastic rigidity of various portions of the body, or all over. If you have access to a copy of Candler's "Everyday Diseases of Children," you will find it well worth while to study the chapter descriptive of meningitis.

In cerebrospinal meningitis, fever is gradual but persistent, the temperature rising to 103° F. or more on the first day; the maximum being 105 to 106 degrees. Occasionally the reverse conditions obtain. Here, the temperature is subnormal throughout; the pulse is extremely rapid; pupils are dilated or unequal; there is more or less contraction of the head; not infrequently opisthotonos occurs; anorexia and constipation are present; on the skin purplish mottlings appear, and these do not fade upon pressure; the skin is so sensitive that the patient cries when touched; the reflexes, as a rule, are exaggerated; respiration is irregular, jerky, simulating the Cheyne-Stokes type; Kernig's sign is present in 90 percent of the cases—indeed, the occurrence of this latter symptom confirms the diagnosis when otherwise the symptoms are obscure and suggest a latent meningitis, and this may be the only symptom present.

Invariably lumbar puncture should be done, not alone for diagnostic purposes, but for therapeutic as well. If serum is used—and it should be—from 15 Cc. in infants to 25 to 70 in adults of spinal fluid is to be withdrawn; the blood pressure serving as a guide to the amount. Then (in the case of adults), from 20 to 25 Cc. of the serum, previously warmed to body-temperature (but not over, as it might then coagulate), is injected very *slowly*. Thereupon the blood pressure promptly falls about 20 or 30 mm.; and when reduced 20 mm., the injection of more serum is undesirable.

The serum, we repeat, must be injected slowly, occupying not less than ten minutes (better fifteen to twenty). The lower the blood pressure, the longer should be the time of injection. Three or four injections of serum, of 30 Cc. each, may be given within twenty-four hours. In infants, four or more

doses, of 15 Cc. each, every twelve hours are recommended. After each injection marked improvement usually is observed, this continuing until the time for the next dose.

The prognosis in tuberculous meningitis is decidedly unfavorable. Many authorities state that they do not know of a single instance of final recovery of the patient.

In cerebrospinal meningitis, the prognosis likewise is bad. When of the epidemic type, the attack may be prolonged for weeks or even months. If in the end the child lives, some form of paralysis, blindness or deafness is liable to remain as a consequence. In cases of the sporadic type, death, as a rule, occurs inside of three or four days.

Whatever the type, the withdrawal of from 15 to 25 Cc. of cerebrospinal fluid promptly will relieve intracranial pressure. Also, leeches may be applied behind the ears, over the mastoid process or the nasal wings. Besides, an ice-bag or ice-coil should be kept continuously in contact with the head, the latter being shaved. Inunctions of unguentum Crédé (or, better, intravenous injections of colloidal silver) are decidedly useful.

We need not point out the necessity for maintaining therapeutic cleanliness of the intestine. As initiative treatment, thereafter, and every third day, blue mass and soda, 1-2 grain, and podophyllin, 1-6 grain, should be given every fifteen minutes until six doses have been taken, this an hour later, to be followed by a laxative-saline draught. If, for any reason, the saline is rejected, then give castor-oil. Gelseminine may be pushed in frequent small doses, and nuclein be administered hypodermically twice daily.

Solid foods must not be permitted. Peptonized milk, clam-broth, properly prepared buttermilk, milk with galactenzyme, and similar foods, are permissible. In the more desperate cases, after the intestine has been thoroughly emptied, rectal alimentation is desirable. You will find H-M-C modified, No. 2, if very *cautiously* administered, of material value in relieving spasm, delirium, and other neuric states. If the bromides are used at all, the sodium salt should be selected. It is best administered per rectum.

A warm sulphur bath (at 100 to 105° F.) may be given twice daily, the duration of each bath being at least fifteen minutes.

In cerebrospinal meningitis, water should be taken in freely, by the patient; but, in place of drinking, which causes vomiting, we favor decinormal saline flushings of the colon, part of which is retained and absorbed.

As we have already stated, the diagnosis in the case under consideration is difficult. Blood, cerebrospinal fluid, and urine should be forwarded, at the earliest possible moment, to our pathologist, for examination.

Send in specimens, doctor; also, give us a clear clinical picture and some information about the prior conditions of the patient's health. State mode of onset. Examine the spine carefully. Test the reflexes. If at all possible, an ophthalmoscopic examination should be made.

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QUERY 6031.—"Trachoma." J. M. W., Ohio, is treating a lady, fifty-six years old, blond, for trachoma. The granulations are fine, almost like "pin-points" (like those Ashhurst describes in his works), in each corner, but in the middle portion of the lid is a patch of granulations as large as a pinhead. Treatment adopted: zinc sulphate and lead acetate, with atropine and cocaine, to relieve congestion and pain. Our correspondent states that he cannot subdue the granulations, and asks us to suggest the most effective remedy.

We regret to say that we cannot suggest any effective "remedy" for trachoma. In the first place, it is necessary to distinguish between the "sago-grain," or true, trachoma, and the follicular, or false granulation, kind.

In follicular conjunctivitis, you have to do with oval or rounded (usually discrete) transparent bodies, the diameter of which seldom exceeds a millimeter. They often are of a faint-yellowish hue, arranged in rows and always larger in the inferior fornix. There is no change in the structure of the conjunctiva. Hypertrophy of the upper lid is trivial. The tarsus is not implicated, and the growths disappear spontaneously without the formation of scar-tissue. There rarely is drooping of the upper lid. Pannus and corneal ulcers are absent. The condition is not contagious.

In true, granular, trachoma, we find round opaque bodies of grayish-white color, extremely friable, deeply imbedded in the conjunctiva. Their diameter may exceed 2 millimeters. They tend to become confluent, and are always larger and more numerous on the upper fornix.

Structural changes are present in the conjunctiva, with papillary hypertrophy of the upper lid and involvement of the tarsus. The upper lid droops in most, and pannus and corneal ulcers occur in at least twenty-five percent of all the cases. The condition is contagious. It may occur at any age.

The treatment of trachoma is prophylactic, medical, and surgical. Under medical treatment, improvement often is but slowly obtained, or is ineffective. Various surgical methods have been advocated. The least objectionable undoubtedly is expression with the roller, or Knapp's forceps.

If only one or two follicles be present, they can be picked up with the fine dissecting forceps and expressed; or, when situated on the tarsus, be enucleated with a spud. A little orthoform rubbed over the palpebral conjunctiva relieves the subsequent pain. A solid stick of copper sulphate frequently is used, this being applied daily in severe cases. Pain, if severe, may be alleviated by rubbing cocaine in first, or by adding orthoform to the copper stick, and bathing directly afterward with iced water.

Silver nitrate stains the conjunctiva, and, therefore, is rarely used. It is mostly applied where there is a copious discharge. Corrosive sublimate, 1 part in 30 parts of glycerin and water, applied with a wool mop, has been found useful after expression.

Jequirity or jequirol (the active toxin of abrus precatorius) has been recommended. It is a dangerous remedy; rarely used. Exposures to the x-ray, for five minutes, three times a week, has proven remarkably beneficial. The treatment is painless, and it may be alternated with the use of the copper-sulphate stick.

Cures have also been reported from the use of radium and the high-frequency current. Carbon-dioxide snow has been lauded.

You may be aware that a 1- or 2-percent solution of iodine in liquid petrolatum has been employed by Russian oculists; mostly in chronic cases, with little secretion; an oily suspension of thymol iodide, we think, will prove quite as satisfactory.

One or two correspondents have reported excellent results from the application of a suspension of galactenzyme, but we are inclined to think that "trachoma" in one part of the country may differ naturally from the type observed in some other, distant, place. Treatment should vary accordingly. Some southern practicians use a 3- to 10-percent ointment of citrate of copper in white vaseline. Wright, of Mobile, asserts that this produces rapid absorption of the granulations, is entirely nonirritant, and can be used by the patient himself.

As the case improves, the periods between applications can be lengthened, and patient use at home a collyrium of zinc sulphocarbolate and boric acid. Some oculists recommend a 5- to 10-percent dilution of ichthyol.

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QUERY 6032.—"Powder Stains in the Eye." C. A. C., Texas, has a patient who was struck in the eye with a Roman candle, and he wants to know how he can remove the persisting powder stains.

Powder marks in the skin may often be removed by pricking into the cuticle pure peroxide of hydrogen. Small granules of powder may be taken out with a dermal punch or a sharp-pointed knife. Also, a needle attached to the negative pole of a battery with a current of from 2 to 10 milliamperes may be inserted at various points about the periphery of the stained area until reaction is marked enough to insure destruction of the involved tissue; the dry eschar falls off in a few days, and then the process may be repeated over the adjacent skin.

Of course, none of these methods are applicable when the eye-ball is involved. Instead, most of the powder may readily be removed from the sclera (under cocaine anesthesia) by a competent oculist.

Diffuse staining is a more difficult matter, and, as we do not feel competent to give advice in the premises, we requested Doctor Burkholder to outline his method of procedure. This is the Doctor's statement:

"All superficial grains of powder should, of course, be removed from the conjunctiva and cornea. All authorities discourage deep dissecting in the cornea or sclera to remove powder-grains; better leave them alone.

"As to removing or disguising the stains of powder, a great deal can be said for and against. If the stains are directly in the pupilary area, nothing ought to be attempted for a considerable length of time after the injury, trusting that nature will be generous, as she usually is. Any effort at removing stains surgically from the pupilary area generally makes matters worse, so far as the vision is concerned; but, from a cosmetic standpoint, some improvement may be promised. Tattooing or pricking the cornea, however, may easily be followed by disastrous results, due to inflammatory involvement of the iris or ciliary body, or both, and no surgeon ought to undertake treatment of this character without fully acquainting the patient with the risk to be assumed.

"Repeated slight traumas of the cornea, such as tattooing, always set up local irritation, which invariably leads to corneal opacities, and these obstruct vision.

"A more detailed description of the condition would put one in the position to be more precise as to treatment, and possibly more hopeful as to prognosis."

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QUERY 6033.—"Deep-Sea Plasma." F. H. S., Massachusetts, asks us what we think of the therapeutic value of deep-sea plasma. Personally, we have had no experience whatever with that material, but an interesting paper on this subject, by Le Boutillier, can be found in *The Journal of the American Medical Association* for January 1, 1910.

It was Quinton who first introduced, some ten years ago, the socalled deep-sea plasma as a remedial agent; since then, however, a number of French investigators have found that, by proper dilution of it, a solution is obtained which is isotonic with blood-plasma and that when kept at blood temperature the leukocytes will continue their ameboid movements in it. This solution contains the mineral salts necessary to the growth and development of the cells of the body and these are present in almost the same relative proportions as obtaining in the blood-plasma.

Le Boutillier has stated that this factitious blood-plasma, according to Robert-Simon, is prepared by diluting 83 parts of sea-water with 190 parts of pure spring-water; and this then is filtered, cold, through a germ-proof Berkefeld filter and preserved in sterile bottles. A number of French firms are putting this product up in sealed glass half-liter tubes.

In the case of infants and children, Le Boutillier injects from 10 to 60 Cc., the ordinary dose being from 15 to 30. The treatment extends over a period of from two or three weeks to as long as four to six months. His experience is that in some infants the condition has improved so much after only four or six injections that they were discharged, while in others the treatment had to be continued for four or five months. Quoting the same author:

"This treatment seems to be of most value in cases in which nutrition is at fault; in other words, in cases of inanition, malnutrition, marasmus, and chronic indigestion. During the past six months, the writer has made a study of this class of cases and, with a few exceptions, the results have been exceedingly gratifying."

In the discussion following the reading of this paper, Dr. Geo. Scott, of New York, said that he has obtained very good results from this therapy, however, being still in the experimental stage, it should be used only as an adjuvant.

The Practitioner (1911, p. 604) mentions sea-water-plasma as being put up by Oppenheimer, Son & Co., Ltd., of London, E. C. They collect the water from the deep parts of the North Sea, while the ship is stationary, about 200 miles from the shore. The water is treated and filtered according to the directions of Robert-Simon, and put in "aseptules" (ampules) holding 30, 50, and 100 Cc. It is also supplied undiluted in sterilized bottles of 8 ounces.

You may have seen the article by Park in *The Medical Council* for July, in which reference was made to his experience with deep-sea-plasma. His first experience, he tells us, was so gratifying that he was led to resort to the sea-water very extensively and in a great variety of cases, and now after two years' trial he "feels constrained to raise his voice in praise of what to his [my] mind is one of the greatest medical discoveries of the century." He feels certain that wherever the patient's vitality is lowered sea-water treatment is indicated.

Park has derived the greatest benefit in surgical cases in which the subjects had a low vitality, in eczema, psoriasis, gastrointestinal derangement, neurasthenia, and in convalescence from the severe acute diseases (pneumonia), simple anemia, after-treatment, in one case of true pernicious anemia, and the like.

On the other hand, Merrick, in *The Archives of Pediatrics*, 1910, declares, that it cannot be claimed that the subcutaneous use of sea-water has in general any remarkable effects, or any effects that cannot be obtained from normal salt solution. He quotes White, of Boston, who reports rather unfavorably upon its use in skin diseases, and several European clinicians who failed to get the results claimed by Simon.

The foregoing extracts may, possibly, enable you to form some sort of a tentative opinion. We are not prepared to say that the use of deep-sea-plasma is superior to the use of an isotonic physiologic salt solution. Please, note that we do not say "normal" salt solution, but "physiologic"; that is, a solution in which all the different mineral salts are contained in the proportion in which they are normally present in the blood-serum. We doubt whether the other constituents of sea-water are present in sufficient amounts to do any good; unless, indeed, we have to do with the ions in the latter.

One or two firms now prepare and furnish this deep-sea-plasma; however, it is not at the present time employed very extensively.